

Public Use Data Tape Documentation

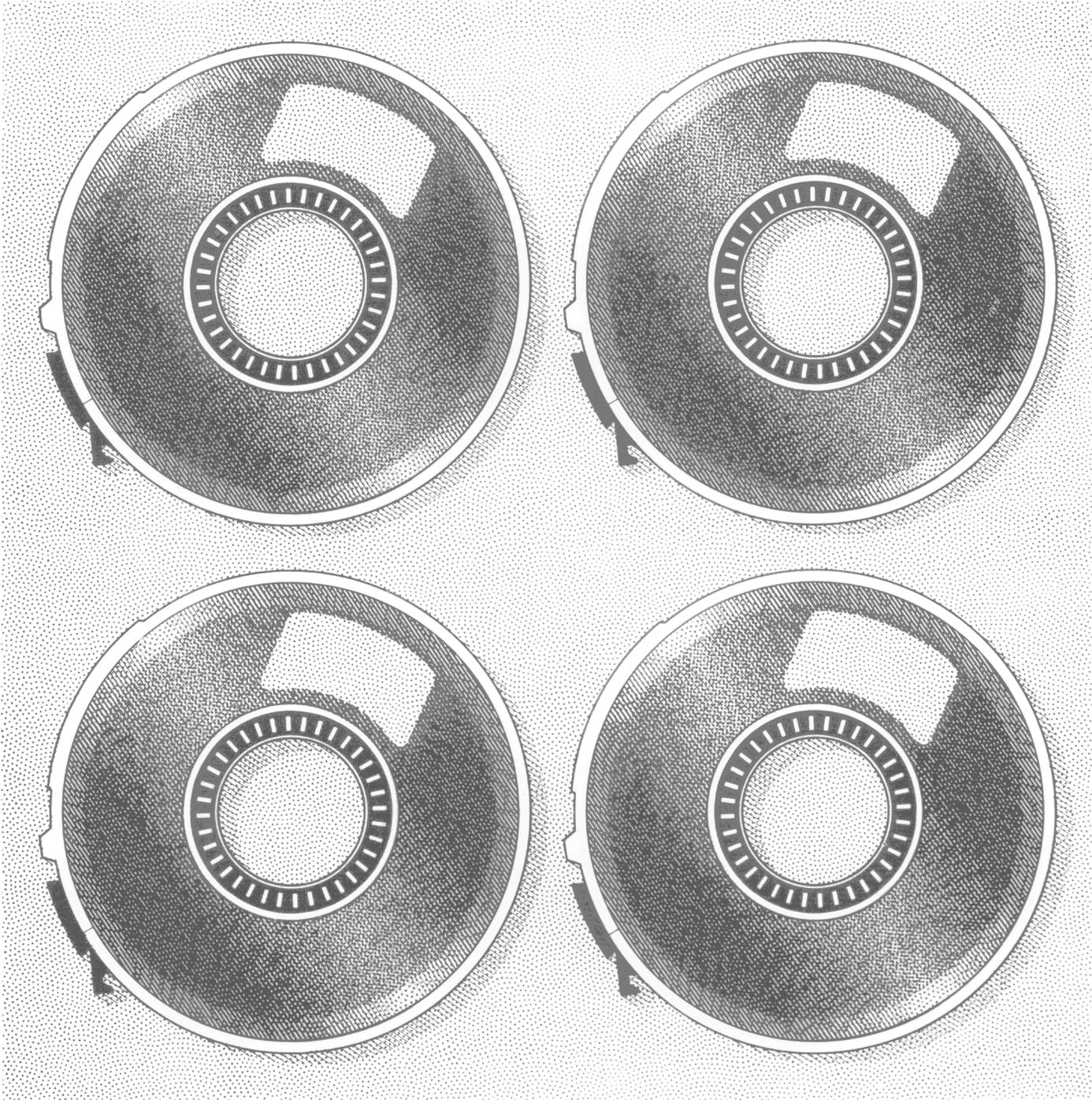
FILE COPY



Audiometric Air Conduction
Test, Ages 4-19 Years
Tape Number 5306

National Health and Nutrition Examination Survey, 1976-1980

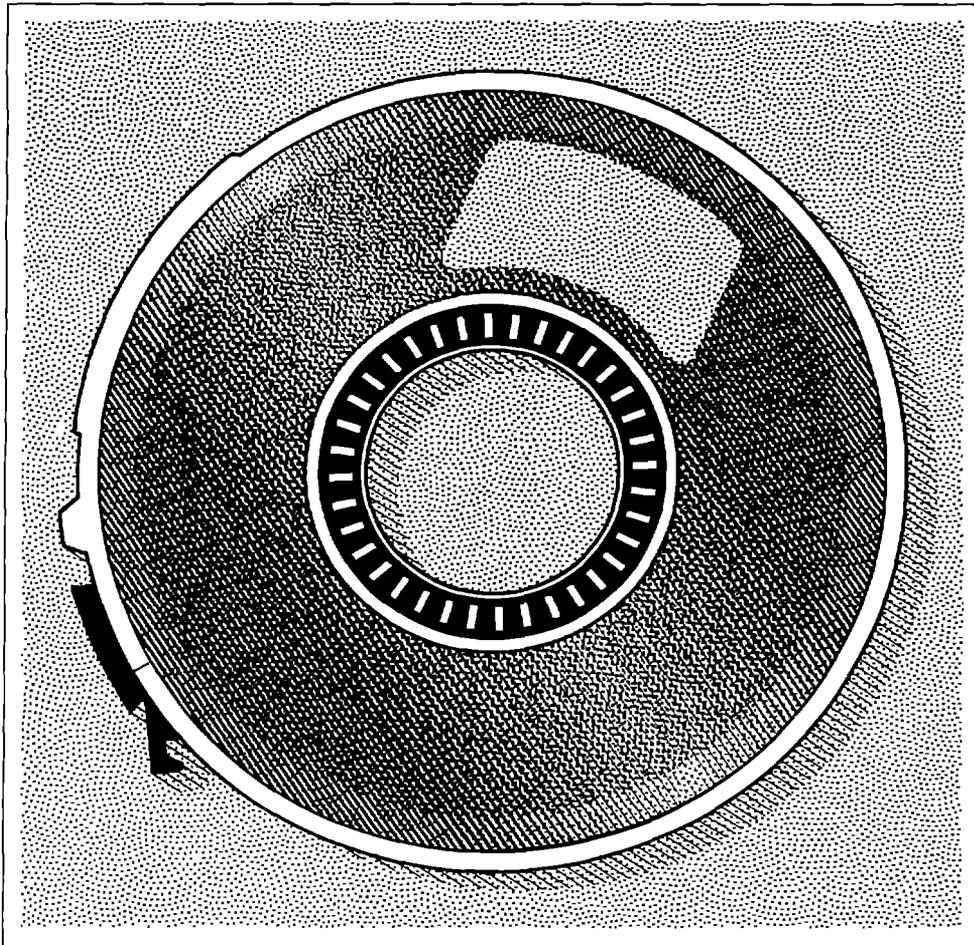
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES • Public Health Service • National Center for Health Statistics



Public Use Data Tape Documentation

Audiometric Air Conduction
Test, Ages 4-19 Years
Tape Number 5306

National Health and Nutrition Examination Survey, 1976-1980



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Center for Health Statistics

Hyattsville, Maryland
September 1984

AUDIOMETRIC AIR CONDUCTION TEST, AGES 4-19 YEARS-
NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY II

Documentation for Public Use Data Tape

Catalog Number 5306

This data tape contains demographic and audiometric data for persons 4 through 19 years of age interviewed and examined in the second National Health and Nutrition Examination Survey (NHANES II), conducted in 1976-1980 by the National Center for Health Statistics (NCHS), U.S. Public Health Service.

This document was prepared by the Division of Health Examination Statistics, NCHS. Michael Rowland, Rita Weinberger, Clyde Rippey, Arnold Engel, Dorothy Blodgett, Marie Leahy, William Kitching, Josephine Blake, and Patricia Vaive were responsible for the data compilation and technical review necessary to assemble this tape and construct the documentation. Earleen Elkins, National Institute of Neurological and Communicative Disorders and Stroke, and Charlotte Leahy, Health Examination Field Operations Branch, NCHS, reviewed the substantive edits. Preparation of drafts and final copy was accomplished by Gilda Bozkurt.

NCHS PUBLIC USE TAPES

Public use data tapes from the National Center for Health Statistics (NCHS) for all NHANES II components will be released as soon as the data have been compiled and documented. It is anticipated that release will occur sequentially through December 1984. NHANES II data tapes are available for purchase from:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, Virginia 22161

(703) 487-4650

A list of NCHS public use data tapes that can be purchased from NTIS can be obtained from:

Scientific and Technical Information Branch
National Center for Health Statistics
Center Building, Room 1-57
3700 East-West Highway
Hyattsville, Maryland 20782

(301) 436-8500

USE OF NCHS DATA TAPES

The National Center for Health Statistics requests the cooperation of recipients of data tapes in certain actions related to their use.

Any publication based on the data should acknowledge NCHS as the original source. It should include a disclaimer which credits the authors for any analyses, interpretations, or conclusions, and not NCHS, which is responsible only for the data.

Users who wish to publish a technical description of the data should make a reasonable effort to insure that the description is consistent with that published by NCHS. This does not mean, however, that NCHS will review such descriptions.

NCHS would appreciate receiving reprints of journal articles or other publications based upon findings from the NHANES II survey. Please send them to the address below.

The data tapes have been carefully edited. Some of the continuous data items have extremely high or low values. It has been verified that the values appear that way on the original interview documents; that is, it has been verified that the values have not resulted from incorrect keypunching. Within each data tape numerous consistency checks have been performed. However, due to the large volume of data collected in the survey, it is likely that a small number of errors or discrepancies remain undetected. NCHS would like to be informed if any such errors are detected so that errata sheets can be issued to previous purchasers and corrections made to a new data tape, if appropriate. Please contact:

Division of Health Examination Statistics
National Center for Health Statistics
Center Building, Room 2-58
3700 East-West Highway
Hyattsville, Maryland 20782
(301) 436-7068

CONTENTS

	<u>Page</u>
I. <u>National Health and Nutrition Examination Survey (NHANES II)</u>	
A. History and Scope.....	1
B. Sample Design and Recommendations for Analysis.....	1
II. <u>Audiometric Air Conduction Test, Ages 4-19 Years</u>	
A. Description	3
B. Demographic Data Collection.....	3
C. Audiometric Tests.....	4
D. Statistical Note.....	4
E. Medical History and Related Data Collection and Examinations...	5
F. Data Editing.....	5
III. <u>Tape Characteristics and Description</u>	
A. Tape Characteristics.....	6
B. Index to Tape Positions.....	7
1. Demographic Section.....	7
2. Sample Weight Section.....	11
3. Audiometric Data Section.....	11
C. Use of Special Terms.....	13
D. Tape Description	
1. Demographic Data.....	14
2. Audiometric Data.....	38
IV. <u>Detailed Notes</u>	43
V. <u>Appendix</u>	
A. Data Collection Techniques and Content.....	63
B. Audiometry Screening Examination Procedures.....	69
C. Audiometry Screening Examination Form.....	80
VI. <u>References</u>	81

I. NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES II)

A. HISTORY AND SCOPE

1. Description of Survey: NHANES II was one of a series of population based surveys conducted by the National Center for Health Statistics to help determine the health status of the Nation. Data were collected through response to questionnaires on medical and health history, food consumption, and health-related behavior. Data also were collected through direct medical examination. The tape documented here contains data from the demographic and examination parts of the survey for persons 4-19 years of age. A detailed description of the design, content, questionnaires, and operation of NHANES II is provided in the following report: Plan and Operation of the Second National Health and Nutrition Examination Survey, 1976-1980, DHHS Pub. No. (PHS) 81-1317, Vital and Health Statistics Series 1, No. 15, Public Health Service, available at cost from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The stock number is 017-022-00752-5. One copy is provided with the documentation herein, and a general summary of the data collection techniques and content is given in the Appendix.
2. Target Population: NHANES II was conducted on a nationwide probability sample of approximately 28,000 persons 6 months through 74 years of age from the civilian, noninstitutionalized population of the United States. The survey started in February 1976 and was completed in February 1980. The NHANES II sample was selected so that certain population groups thought to be at high risk of malnutrition (persons with low incomes, preschool children, and the elderly) were oversampled. Adjusted sampling weights were then computed for 76 age, sex, and race categories to inflate the sample in such a manner as to closely reflect the estimated civilian, noninstitutionalized U.S. population 6 months through 74 years of age at the midpoint of the survey (March 1, 1978).

B. SAMPLE DESIGN AND RECOMMENDATIONS FOR ANALYSIS

NHANES II uses a multistage sample designed to represent the civilian, noninstitutionalized population of the United States, 6 months through 74 years of age. Since the sample is not a simple random one and certain population groups were oversampled, it is necessary to incorporate the person's sample weight for proper analysis of the data. The sample

weight is a composite of the individual selection probability, adjustments for nonresponse, and poststratification adjustments.

NHANES II provides information on 20,322 individuals who were both interviewed and examined, and on another 4,964 individuals who were interviewed but not examined, in the age range 6 months through 74 years of age. In addition to the general examination components, several more detailed examinations were performed on subsamples of the population. Therefore, instead of there being one sample weight per person, there are several sample weights for each person. For a person not selected for a particular subsample, the associated subsample weight is zero. When analyzing the special subsamples, the analyst must be careful to select the appropriate sampling weight from the weights found in tape locations 282-323. For a more complete description of how the sample weights are calculated, see the detailed note section of this documentation. This file contains data on all 5,901 interviewed and examined persons 4 through 19 years of age.

The NHANES II data were collected using a complex sample design involving both clustering and stratification. Because of the complex design and the ratio adjustments applied to the sample weights, the direct application of standard statistical analysis methods for variance estimation and hypothesis testing may be very misleading. The modification of statistical analysis procedures to incorporate the effects of complex survey designs is an important area of research. However, the current methodologies appropriate for the analysis of data from such surveys have not been made readily available in the standard packaged statistical software.

There are computer programs available which provide the capability of variance estimation for complex sample designs. The balanced repeated replication approach ¹ is utilized in &REPERR and &PSALMS to calculate the variance-covariance matrix. Both routines are available within the OSIRIS IV library.² SURREGR³ and SUPERCARP⁴ are programs that calculate the variance-covariance matrix using the linearization approach ⁵ (Taylor series expansion). Another program, SESUDAAN,⁶ calculates variances and design effects. SURREGR and SESUDAAN are special procedures for the SAS package, which is available from SAS Institute, Box 8000, Carey, N.C., 27511.

In order to provide the user with the capability of estimating the complex sample variances in the NHANES II data using the above procedures, Strata

and Pseudo Primary Sampling Unit (PSU) codes have been provided on all data tapes in positions 324-326. These variables and the sample weights are necessary for the calculation of variances.

Even though the overall number of examined persons in this survey is quite large for statistical inference purposes, subclass analyses can lead to estimators that are unstable, particularly estimates of variances. Consequently, analyses of subclasses require that the user pay particular attention to the coefficient of variation for the estimates of means, proportions and totals. In addition, small sample sizes, or a small number of PSU's used in the variance calculations, may produce unstable estimates of the variances using the above computer programs.

An NCHS publication discusses these issues and describes analytic strategies for examining various hypotheses for the first National Health and Nutrition Examination Survey (NHANES I), which used a similar type of complex sample design.⁷

II. AUDIOMETRIC AIR CONDUCTION TEST, AGES 4-19 YEARS

A. DESCRIPTION

This data tape contains demographic, and audiometric data for persons 4-19 years old who were both interviewed and examined in the second National Health and Nutrition Examination Survey (NHANES II).

B. DEMOGRAPHIC DATA COLLECTION

An advance letter, announcing the forthcoming arrival of an interviewer from the U.S. Bureau of the Census, was mailed to each household that fell into the NHANES II probability sample. The interviewer subsequently visited the household to ascertain its composition, select the sample person(s), and administer demographic and medical history questionnaires. Demographic information relating to the household, the housing unit, and each sample person 6 months through 11 years of age was obtained from an available and competent household respondent. In contrast, the preferred respondent for the medical information for persons 12 through 74 years of age was the actual sample person, with proxy response accepted when the sample person was not available.

C. AUDIOMETRIC TESTS

Each child or youth 4-19 years old was tested at the following four frequencies: 500, 1000, 2000, and 4000 Hertz (Hz), with the 1000 Hz frequency repeated a second time as a measure of the reliability of test results. Hearing threshold level, as defined here, is the lowest intensity of a pure tone produced in the audiometer earphone that is just audible to the ear of the examinee in a specified number of trials. The standard audiometers used in the survey were calibrated in accordance with the 1969 American National Standards Institute (ANSI) specifications. Hence the zero sound intensity level on the dial of these instruments corresponds to the 1969 ANSI reference zero.

Alternation of presentation to each ear was varied among examinees to safeguard against bias in testing. The threshold recorded for each frequency was the lowest decibel (dB) level at which 50 percent or more of the responses were obtained, that is, in two out of three or three out of five trials. Masking for the nontest ear was done in air conduction testing only on retest when there was a 40 dB difference or more in the thresholds for the two ears. The effective range of audiometric testing was 0 to 100 dB. Hearing threshold levels of 100 dB or more were coded "99." Hearing threshold data obtained at 0 dB to - 20 dB have been grouped at 0 dB in order to avoid reporting spurious findings due to nonlinearity of the hearing level attenuators of the six audiometers. Hearing threshold data reported at 0 dB to 10 dB must be considered with caution as the linearity of the hearing level attenuators on several of the six audiometers was found to vary beyond acceptable tolerance limits. Standardized testing procedures were used to insure as consistent test results as possible throughout the survey. Any condition such as earache, cold, or other problem that might affect the test results was also recorded.

D. STATISTICAL NOTE

The data user is cautioned that statistical summary measures such as the mean, standard deviation and standard error will reflect the truncation of the distribution of pure-tone air conduction hearing levels at 0 dB and + 100 dB and nonlinearity at 0 dB to 10 dB. Estimated percentiles at the median and above should be relatively free of the effects of distribution truncation and of measurement bias. With these caveats in mind, these data provide data users with the opportunity to examine for themselves a large set of

audiometric measurements made in a standardized manner on a representative sample of the 4-19 year old segment of the U.S. population.

E. MEDICAL HISTORY AND RELATED DATA COLLECTION AND EXAMINATIONS

Medical history data obtained in the household are available on other public use tapes available from NTIS (Catalog Numbers 5010 and 5020). Those tapes contain data on hearing and speech problems in addition to other medical history information.

Tape Catalog Number 5010 contains data for children 3-11 years of age on running ear, ear infection, deafness or trouble hearing (including age at onset), rating of hearing by ear, surgery on ears, hearing aid use, hearing testing, speech problems, speech therapy, relatives with hearing or speech problems, age when spoke first word, age when started to use sentences, and other language spoken.

Tape Catalog Number 5020 contains data for persons 12-74 years old on ringing or funny noises in ears, running ear, ear infection, deafness or trouble hearing (including age at onset), causes of hearing trouble, rating of hearing by ear, surgery on ears, hearing tested, hearing aid use and, for those at least 17 years old, job history related to noise level.

Additional hearing and speech related data were also collected in the examination portion of the survey. A speech pathology test involved the use of a tape recording of the subject's repetition of specially developed sentences. It was carried out on examined persons between the ages of 4 and 6 years, permitting interpretations as an indication of problems with articulation and language development. A comprehensive examination of the ear, nose, and throat (ENT) during the physical examination was performed by a physician on persons 6 months through 74 years. The examination included an inspection of the external ears, auditory canals, tympanic membranes, anterior nasal cavity, and oral pharynx.

F. DATA EDITING

Preliminary editing of the interview forms was done by personnel of NCHS. They verified and corrected, to the extent possible, problematic data and did further edits for consistency, completeness, and accuracy of the data against microfilm records of the original questionnaire where needed.

III. TAPE CHARACTERISTICS AND DESCRIPTION**A. TAPE CHARACTERISTICS**

Title: Audiometric Air Conduction Test, Ages 4-19 Years
Catalog Number: 5306
Data Set Name: HEHANES2.DU530601
Record Length: 480
Blocksize: 4800
Density: 1600 BPI
Number of Records: 5,901
Number of Reels: 1
Recording Mode: Fixed Block, EBCDIC
Channel: 9 Track
Created by: Division of Health Examination Statistics
National Center for Health Statistics
Hyattsville, Maryland

B. INDEX TO TAPE POSITIONS

<u>1. Demographic Section</u>	<u>Tape Positions</u>
<u>a. Residence Data</u>	
Sample Sequence Number.....	1- 5
Catalog Number (5371-for Demographic Data only).....	6- 9
Unused position(s).....	10
Size of place.....	11
SMSA-not SMSA.....	12
Unused position(s).....	13- 23
Type of living quarters.....	24
Land usage.....	25
If rural, asked does this place have 10 acres or more?.....	26
If 10 acres or more, asked if in the last 12 months did sales of farm produce and livestock amount to \$50 or more?.....	27
If less than 10 acres, asked if in the last 12 months did sales of farm produce and live stock amount to \$250 or more?.....	28
Unused position(s).....	29
Total number of persons in household.....	30- 31
Total number of sample persons in household.....	32- 33
Unused position(s).....	34
<u>b. Sample Person Data</u>	
Family relationship.....	35
Examination status.....	36
Family unit number.....	37- 41
Unused position(s).....	42- 44
Age-months (at interview).....	45- 46
Age-years (at interview).....	47- 48
Unused position(s).....	49- 50
Date of birth-month.....	51- 52
Date of birth-year.....	53- 54
Sex.....	55
Race.....	56
In what State was he/she born?.....	57- 58
Is he/she married, widowed, divorced, separated, or never married?.....	59
National origin or ancestry.....	60- 61
Education level.....	62- 63
Grade completed.....	64
What was he/she doing during most of the past 12 months?.....	65
What was he/she doing?.....	66
Did he/she work at a job or business at any time during the past three months?.....	67
Did he/she work full or part-time when working?.....	68

Demographic Section (Cont.)

<u>Sample Person Data (Cont.)</u>	<u>-Tape Positions</u>
Was he/she working within last two weeks not counting work around the house?.....	69
Even though he/she did not work, does he/she have a job or business?.....	70
Was he/she looking for work or on layoff from a job?.....	71
Which - looking for work or on layoff from a job?.....	72
What kind of industry or business is this?.....	73- 75
What kind of work was he/she doing?.....	76- 78
Was he/she in private company or business or working for individual for wages, salary, or commission?.....	79
Did he/she ever serve in the armed forces of the U.S.?.....	80
When did he/she serve?.....	81
Unused position(s).....	82- 90
c. <u>Household Data</u>	
How many rooms are in this ...? Count the kitchen, but not the bath.....	91
How many bedrooms are in this ...?.....	92
Do you have complete kitchen facilities in your living quarters, that is a kitchen sink with piped water, a refrigerator and a range or cookstove? (Asked only of unrelated household members.).....	93
Do you have access to complete kitchen facilities in this house?.....	94
Do you have access to a range or cookstove?.....	95
Do you have access to a refrigerator?.....	96
Do you have access to a sink with piped water?.....	97
Is there piped water in this house (these living quarters)?.....	98
Is there both hot and cold water?.....	99
Are these kitchen facilities used by anyone not living in this household?.....	100
What is the main type of heating system you have?.....	101-102
Do you have air conditioning?.....	103
How many motor vehicles are owned or regularly used for transportation by members of your family?.....	104
Is any language other than English spoken by family members living here?.....	105
What language?.....	106
Which of these income groups represents your total combined family income for the past 12 months?.....	107-108

Demographic Section (Cont.)

<u>Household Data (Cont.)</u>	<u>-Tape Positions</u>
During the past 12 months, how much money did you and all members of your family receive in wages or salaries before deductions (under \$7,000 only)?.....	109-112
Social security or railroad retirement?.....	113
Unused position(s).....	114
If yes, how much?.....	115-118
Welfare payments or other public assistance?.....	119
Unused position(s).....	120
If yes, how much?.....	121-124
Unemployment compensation or workmen's compensation?.....	125
Unused position(s).....	126
If yes, how much?.....	127-130
Government employee pension or private pensions?.....	131
Unused position(s).....	132
If yes, how much?.....	133-136
Dividends, interest or rent?.....	137
Unused position(s).....	138
If yes, how much?.....	139-142
Net income from their own business (nonfarm), professional practice, or partnership?.....	143
Unused position(s).....	144
If yes, how much?.....	145-148
Net income from a farm?.....	149
Unused position(s).....	150
If yes, how much?.....	151-154
Veteran's payments?.....	155
Unused position(s).....	156
If yes, how much?.....	157-160
Alimony, child support or other support from persons not in household?.....	161
Unused position(s).....	162
If yes, how much?.....	163-166
Any other income?.....	167
Unused position(s).....	168
If yes, how much?.....	169-172
Total amount.....	173-176
Check Item B - Food stamps available.....	177
Are you certified to participate in the food stamp program?.....	178
Are you buying food stamps now?.....	179
What is the main reason you are not participating in the program?.....	180
Are you certified for commodity distribution program?.....	181

Demographic Section (Cont.)

<u>Household Data (Cont.)</u>	<u>Tape Positions</u>
Are you receiving commodity foods now for your family?.....	182
Why aren't you participating in the program?.....	183
Date of exam.....	184-189
Age in years (at examination).....	190-191
Unused position(s).....	192-205
Race-sex recode for sample persons.....	206
Farm, nonfarm recode for sample person.....	207
Interview status.....	208
Region.....	209
Poverty index.....	210-212
Unused position(s).....	213-246

d. Head of Household Data

Age in years.....	247-248
Unused position(s).....	249-250
Date of birth-month.....	251-252
Date of birth-year.....	253-254
Sex.....	255
Race.....	256
In what State was he/she born?.....	257-258
Is he/she married, widowed, divorced, separated or never married?.....	259
National origin or ancestry?.....	260-261
Education level.....	262-263
Grade completed.....	264
What was he/she doing most of the past 12 months?.....	265
What was he/she doing?.....	266
Did he/she work at job or business during past three months?.....	267
Did he/she work full or part-time when working?.....	268
Did he/she work at any time the last two weeks not counting work around the house?.....	269
Even though he/she did not work, does he/she have a job or business?.....	270
Was he/she looking for work or on layoff from a job?.....	271
Which - looking for work or on layoff from a job?.....	272
Type of industry or business.....	273-275
What kind of work was he/she doing?.....	276-278
Was he/she in private company or business or working for individual for wages, salary, or commission?.....	279
Did he/she ever serve in the armed forces of the U.S.?.....	280
When did he/she serve?.....	281

<u>2. Sample Weight Section</u>	<u>Tape Positions</u>
Examined final weight.....	282-287
Medical history interview final weight.....	288-293
Glucose Tolerance Test final examined weight.....	294-299
Lead final examined weight.....	300-305
Carboxyhemoglobin final examined weight.....	306-311
Bile acids final examined weight.....	312-317
Unused positions.....	318-323
Strata code.....	324-325
Pseudo PSU code.....	326
Poverty Non-Poverty Segments.....	327
Unused position(s).....	328-400
<u>3. Audiometry Air Conduction Test Data Section</u>	
Catalog Number.....	401-404
Unused Positions.....	405-408
Audiometer Number.....	409-413
Examiner Number.....	414-415
Unused Positions.....	416-417
<u>1000 Hertz -- Right Ear</u>	
Retest Right with Masking on Left.....	418-419
Hearing Level.....	420-422
<u>1000 Hertz -- Left Ear</u>	
Retest Left with Masking on Right.....	423-424
Hearing Level.....	425-427
<u>2000 Hertz -- Right Ear</u>	
Retest Right with Masking on Left.....	428-429
Hearing Level.....	430-432
<u>2000 Hertz -- Left Ear</u>	
Retest Left with Masking on Right.....	433-434
Hearing Level.....	435-437
<u>4000 Hertz -- Right Ear</u>	
Retest Right with Masking on Left.....	438-439
Hearing Level.....	440-442
<u>4000 Hertz -- Left Ear</u>	
Retest Left with Masking on Right.....	443-444
Hearing Level.....	445-447
<u>500 Hertz -- Right Ear</u>	
Retest Right with Masking on Left.....	448-449
Hearing Level.....	450-452

<u>500 Hertz -- Left Ear</u>	
Retest Left with Masking on Right.....	453-454
Hearing Level.....	455-457
<u>Repeated 1000 Hertz -- Right Ear</u>	
Retest Right with Masking on Left.....	458-459
Hearing Level.....	460-462
<u>Repeated 1000 Hertz -- Left Ear</u>	
Retest Left with Masking on Right.....	463-464
Hearing Level.....	465-467
Conditions Affecting Test Results.....	468-475
Unused Positions.....	476-479
Dummy Record Flag.....	480

C. USE OF SPECIAL TERMS

The term "unused positions" refers to blank areas in the data.

The term "blank, but applicable", is used to indicate a data item that was to have a response for a sample person but for which no usable data were provided. This includes unanswered data fields, as well as those containing impossible entries: i.e., out-of-range or inconsistent with other entries. The term "blank" refers to data items where the sample person was not supposed to respond to the question.

All audiometric data items were coded as "blank" for sample persons for whom no audiometric test was conducted (see detailed note for tape position 480, which refers to these "dummy records").

The audiometric test form as well as the other examination and questionnaire forms referred to in this documentation and duplicated in the Plan and Operation of the Second National Health and Nutrition Examination Survey, are included with this documentation.⁸

D. TAPE DESCRIPTION

1. DEMOGRAPHIC DATA

TAPE POSITION, ITEM DESCRIPTION, AND CODES	CONTROL COUNTS

RESIDENCE DATA IN POSITIONS 001-034	

POS. 001-005 SAMPLE SEQUENCE NUMBER	
00037-27567.....	5,901
POS. 006-009 CATALOG NUMBER	
5371.....	5,901
POS. 010 UNUSED POSITION	
POS. 011 SIZE OF PLACE (SEE DETAILED NOTE)	
1=URBANIZED AREA WITH 3,000,000 OR MORE.....	734
2=URBANIZED AREA 1,000,000 TO 2,999,999.....	722
3=URBANIZED AREA WITH 250,000 TO 999,999.....	752
4=URBANIZED AREA UNDER 250,000.....	594
5=URBAN PLACE 25,000 OR MORE OUTSIDE URBANIZED AREA.....	266
6=URBAN PLACE 10,000-24,999 OUTSIDE URBANIZED AREA.....	240
7=URBAN PLACE 2,500-9,999 OUTSIDE URBANIZED AREA.....	414
8=RURAL.....	2,179
POS. 012 SMSA-NOT SMSA (SEE DETAILED NOTE)	
1=IN SMSA, IN CENTRAL CITY.....	1,672
2=IN SMSA, NOT IN CENTRAL CITY.....	1,694
4=NOT IN SMSA.....	2,535
POS. 013-023 UNUSED POSITIONS	
POS. 024 TYPE OF LIVING QUARTERS (QUES. 7)	
1=HOUSING UNIT.....	5,817
2=OTHER UNIT.....	84

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 025 LAND USAGE (QUES. 9)	
1=URBAN.....	3,738
2=RURAL.....	2,163
POS. 026 IF RURAL, ASKED DOES THIS PLACE HAVE 10 ACRES OR MORE? (QUES. 11A)	
1=YES.....	433
2=NO.....	1,730
9=NOT APPLICABLE.....	3,738
POS. 027 IF 10 ACRES OR MORE, ASKED IF IN THE PAST 12 MONTHS DID SALES OF FARM PRODUCTS AMOUNT TO \$50 OR MORE? (QUES. 11B)	
1=YES.....	255
2=NO.....	178
9=NOT APPLICABLE.....	5,468
POS. 028 IF LESS THAN 10 ACRES, ASKED IF IN THE PAST 12 MONTHS DID SALES OF FARM PRODUCTS AMOUNT TO \$250 OR MORE? (QUES. 11C)	
1=YES.....	59
2=NO.....	1,671
9=NOT APPLICABLE.....	4,171
POS. 029 UNUSED POSITION	
POS. 030-031 TOTAL NUMBER OF PERSONS IN HOUSEHOLD	
01-15 AS GIVEN.....	5,901
POS. 032-033 TOTAL NUMBER OF SAMPLE PERSONS IN HOUSEHOLD	
01-06 AS GIVEN.....	5,901
POS. 034 UNUSED POSITION	

 TAPE POSITION, ITEM DESCRIPTION, CODES
 CONTINUED

CONTROL
COUNTS
 SAMPLE PERSON DATA IN POSITIONS 035-081

POS. 035 FAMILY RELATIONSHIP

1=HEAD, ONE PERSON LIVING ALONE OR WITH NON-RELATIVES....	123
2=HEAD, TWO OR MORE RELATED PERSONS IN FAMILY.....	31
3=WIFE.....	55
4=CHILD.....	5,342
5=OTHER RELATIVE.....	323
6=FOSTER CHILD.....	27

POS. 036 EXAMINATION STATUS

1=EXAMINED.....	5,901
-----------------	-------

 POS. 037-041 FAMILY UNIT SEQUENCE NUMBER
 (SEE DETAILED NOTE)

00003-21044 AS GIVEN.....	5,901
---------------------------	-------

POS. 042-044 UNUSED POSITIONS

POS. 045-046 AGE-MONTHS AT INTERVIEW (QUES. 3)

BLANK IF GREATER THAN 11 MONTHS.....	5,901
--------------------------------------	-------

POS. 047-048 AGE-YEARS AT INTERVIEW (QUES. 3)

04-19 YEARS.....	5,901
------------------	-------

POS. 049-050 UNUSED POSITIONS

POS. 051-052 DATE OF BIRTH-MONTH (QUES. 2)

01-12 MONTH.....	5,901
------------------	-------

POS. 053-054 DATE OF BIRTH-YEAR (QUES. 2)

56-75 YEAR.....	5,901
-----------------	-------

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 055 SEX (QUES. 4)	
1=MALE.....	3,037
2=FEMALE.....	2,864
POS. 056 RACE (QUES. 5) (SEE DETAILED NOTE)	
1=WHITE.....	4,781
2=BLACK.....	984
3=OTHER.....	136
POS. 057-058 IN WHAT STATE WAS HE/SHE BORN? (QUES. 6) (SEE DETAILED NOTE)	
01-97.....	5,829
88=BLANK, BUT APPLICABLE.....	72
POS. 059 IS HE/SHE NOW MARRIED, WIDOWED, DIVORCED, SEPARATED, OR NEVER MARRIED? (QUES. 7)	
1=UNDER 17.....	4,954
2=MARRIED.....	83
3=WIDOWED.....	1
4=DIVORCED.....	3
5=SEPARATED.....	4
6=NEVER MARRIED.....	853
8=BLANK, BUT APPLICABLE.....	3
POS. 060-061 NATIONAL ORIGIN OR ANCESTRY (QUES. 8)	
01=COUNTRIES OF CENTRAL OR SOUTH AMERICA.....	44
02=CHICANO.....	25
03=CUBAN.....	16
04=MEXICAN.....	89
05=MEXICANO.....	26
06=MEXICAN-AMERICAN.....	199
07=PUERTO RICAN.....	78
08=OTHER SPANISH.....	34
09=OTHER EUROPEAN, SUCH AS GERMAN, FRENCH, ENGLISH, IRISH...	3,864
10=BLACK, NEGRO OR AFRO-AMERICAN.....	947
11=AMERICAN INDIAN OR ALASKAN NATIVE.....	68
12=ASIAN OR PACIFIC ISLANDER SUCH AS CHINESE, JAPANESE, KOREAN, PHILIPPINO, SAMOAN.....	104
13=ANOTHER GROUP NOT LISTED.....	324
88=BLANK, BUT APPLICABLE.....	83

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 062-063 WHAT WAS THE HIGHEST GRADE OR YEAR OF SCHOOL HE/SHE HAS EVER ATTENDED? (QUES. 9A)	
00=NONE (REGARDLESS OF AGE).....	1,693
21-28=ELEMENTARY GRADES (1-8).....	2,417
31-34=HIGH SCHOOL (1-4).....	1,527
41-45=COLLEGE (1-5+).....	230
88=BLANK, BUT APPLICABLE.....	34
POS. 064 DID HE/SHE FINISH THE GRADE YEAR? (QUES. 9B)	
1=YES.....	1,220
2=NO.....	2,949
8=BLANK, BUT APPLICABLE.....	39
BLANK.....	1,693
POS. 065 WHAT WAS HE/SHE DOING DURING MOST OF THE PAST 12 MONTHS? (QUES. 10A)	
1=WORKING.....	280
2=KEEPING HOUSE.....	55
3=SOMETHING ELSE.....	606
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	4,954
POS. 066 WHAT WAS HE/SHE DOING? (QUES. 10B)	
1=LAYOFF.....	3
2=RETIRED.....	1
3=STUDENT.....	573
5=STAYING HOME.....	8
6=LOOKING FOR WORK.....	14
7=UNABLE TO WORK.....	3
8=BLANK, BUT APPLICABLE.....	6
0=OTHER.....	4
BLANK.....	5,289
POS. 067 DID HE/SHE WORK AT A JOB OR BUSINESS AT ANY TIME DURING THE PAST THREE MONTHS? (Ques. 10C)	
1=YES.....	330
2=NO.....	331
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,234

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 068 WHEN HE/SHE WAS WORKING, DID HE/SHE USUALLY WORK FULL OR PART TIME? (QUES. 10D)	
1=FULL TIME.....	293
2=PART TIME.....	317
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,285
POS. 069 DID HE/SHE WORK AT ANY TIME LAST WEEK OR THE WEEK. BEFORE NOT COUNTING WORK AROUND THE HOUSE? (QUES. 11A)	
1=YES.....	479
2=NO.....	131
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,285
POS. 070 EVEN THOUGH HE/SHE DID NOT WORK DURING THAT TIME, DOES HE/SHE HAVE A JOB OR BUSINESS? (QUES. 11B)	
1=YES.....	32
2=NO.....	430
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,433
POS. 071 WAS HE/SHE LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11C)	
1=YES.....	113
2=NO.....	349
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,433
POS. 072 WHICH-LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11D)	
1=LOOKING.....	109
2=LAYOFF.....	3
3=BOTH.....	1
8=BLANK, BUT APPLICABLE.....	6
BLANK.....	5,782

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 073-075 WHAT KIND OF INDUSTRY OR BUSINESS IS THIS? (QUES. 12B) (SEE DETAILED NOTE)	
1017-937 (LAST DIGIT 7,8,9).....	585
000=BLANK, BUT APPLICABLE.....	39
BLANK.....	5,277
POS. 076-078 WHAT KIND OF WORK WAS HE/SHE DOING? (QUES. 12C) (SEE DETAILED NOTE)	
001-985=OCCUPATION (LAST DIGIT 0-6).....	584
000=BLANK, BUT APPLICABLE.....	40
BLANK.....	5,277
POS. 079 WAS HE/SHE AN EMPLOYEE OF A PRIVATE COMPANY, BUSINESS, OR INDIVIDUAL FOR WAGES, SALARY, OR COMMISSION? (QUES. 12E)	
1=PRIVATE.....	496
2=A FEDERAL GOVT EMPLOYEE.....	15
3=A STATE GOVT EMPLOYEE.....	18
4=A LOCAL GOVT EMPLOYEE.....	44
6=SELF EMPLOYED (OR FARM).....	10
7=WORKING WITHOUT PAY IN FAMILY BUSINESS OR FARM.....	2
8=NEVER WORKED.....	28
0=BLANK, BUT APPLICABLE.....	11
BLANK.....	5,277
POS. 080 DID HE/SHE EVER SERVE IN THE ARMED FORCES OF THE UNITED STATES? (QUES. 13A)	
1=YES.....	8
2=NO.....	930
8=BLANK, BUT APPLICABLE.....	9
BLANK.....	4,954
POS. 081 WHEN DID HE/SHE SERVE? (QUES. 13B)	
1=VIETNAM.....	2
6=OTHER SERVICE.....	6
8=BLANK, BUT APPLICABLE.....	9
BLANK.....	5,884
POS. 082-090 UNUSED POSITIONS	

 TAPE POSITION, ITEM DESCRIPTION, CODES
 CONTINUED

CONTROL
COUNTS
 HOUSEHOLD DATA IN POSITIONS 091-212

POS. 091 HOW MANY ROOMS ARE IN THIS...? COUNT THE KITCHEN,
 BUT NOT THE BATHROOM. (QUES. 14A)

1-8 ROOMS.....	5,355
9=9 OR MORE ROOMS.....	546

POS. 092 HOW MANY BEDROOMS ARE IN THIS...? (QUES. 14B)

0-7 BEDROOMS - MORE THAN 7 BEDROOMS CODED AS 7.....	5,901
---	-------

POS. 093 ASKED ONLY OF UNRELATED HOUSEHOLD MEMBERS. DO YOU
 HAVE COMPLETE KITCHEN FACILITIES IN YOUR LIVING
 QUARTERS, THAT IS, A KITCHEN SINK WITH PIPED WATER,
 A REFRIGERATOR AND A RANGE OR COOKSTOVE?
 (QUES. 14C)

1=YES.....	19
2=NO.....	67
BLANK.....	5,815

POS. 094 DO YOU (HAVE/HAVE ACCESS TO) COMPLETE KITCHEN
 FACILITIES IN THIS HOUSE, THAT IS, A KITHCEN SINK
 WITH PIPED WATER, A REFRIGERATOR AND A RANGE OR
 COOKSTOVE? (QUES. 15A)

1=YES.....	5,758
2=NO.....	104
8=BLANK, BUT APPLICABLE.....	20
BLANK.....	19

POS. 095 DO YOU (HAVE/HAVE ACCESS TO) A RANGE OR COOKSTOVE?
 (QUES. 15B)

1=YES.....	63
2=NO.....	41
8=BLANK, BUT APPLICABLE.....	20
BLANK.....	5,777

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED		CONTROL COUNTS
POS. 096	DO YOU (HAVE/HAVE ACCESS TO) A REFRIGERATOR? (QUES. 15B)	
	1=YES.....	75
	2=NO.....	29
	8=BLANK, BUT APPLICABLE.....	20
	BLANK.....	5,777
POS. 097	DO YOU (HAVE/HAVE ACCESS TO) A SINK WITH PIPED WATER? (QUES. 15B)	
	1=YES.....	42
	2=NO.....	62
	8=BLANK, BUT APPLICABLE.....	20
	BLANK.....	5,777
POS. 098	IS THERE PIPED WATER IN THIS HOUSE (THESE LIVING QUARTERS)? (QUES. 15C)	
	1=YES.....	3
	2=NO.....	59
	8=BLANK, BUT APPLICABLE.....	20
	BLANK.....	5,819
POS. 099	IS THERE BOTH HOT AND COLD WATER? (QUES. 15D)	
	1=YES.....	41
	2=NO.....	4
	8=BLANK, BUT APPLICABLE.....	20
	BLANK.....	5,836
POS. 100	ARE THESE KITCHEN FACILITIES USED BY ANYONE NOT LIVING IN THIS HOUSEHOLD? (QUES. 15E)	
	1=YES.....	88
	2=NO.....	5,670
	8=BLANK, BUT APPLICABLE.....	20
	BLANK.....	123

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 101-102 WHAT IS THE MAIN TYPE OF HEATING SYSTEM YOU HAVE? (QUES. 16)	
11=STEAM OR HOT WATER SYSTEM.....	896
12=CENTRAL WARM AIR FURNACE WITH DUCTS TO INDIVIDUAL ROOM OR CENTRAL HEAT PUMP (FORCED AIR).....	2,938
13=BUILT IN ELECTRIC UNITS (PERMANENTLY INSTALLED IN WALL, CEILING, OR BASEBOARD).....	330
14=FLOOR, WALL OR PIPELESS FURNACE.....	503
15=CIRCULATING, RADIANT OR ROOM HEATERS, WITH FLUE OR VENT, BURNING GAS, OIL OR KEROSENE.....	452
16=CIRCULATING, RADIANT, OR ROOM HEATERS (NOT PORTABLE) WITHOUT FLUE OR VENT BURNING GAS, OIL, OR KEROSENE....	269
17=FIREPLACE OR STOVES BURNING COAL, WOOD, OR COKE.....	223
18=PORTABLE ROOM HEATERS OF ANY KIND.....	111
19=SOME OTHER TYPE.....	62
20=NONE, UNIT IS NOT HEATED.....	80
88=BLANK, BUT APPLICABLE.....	37
POS. 103 DO YOU HAVE AIR CONDITIONING? (QUES. 17)	
1=YES, INDIVIDUAL ROOM UNIT.....	1,585
2=YES, CENTRAL AIR CONDITIONING.....	1,007
3=NO.....	3,283
8=BLANK, BUT APPLICABLE.....	26
POS. 104 HOW MANY MOTOR VEHICLES ARE OWNED OR REGULARLY USED FOR TRANSPORTATION BY MEMBERS OF YOUR FAMILY? (QUES. 18)	
0=NONE.....	654
1-8 VEHICLES (MORE THAN 8 CODED AS 8)	5,203
9=BLANK, BUT APPLICABLE.....	44
POS. 105 IS ANY LANGUAGE OTHER THAN ENGLISH FREQUENTLY SPOKEN BY FAMILY MEMBERS LIVING HERE? (QUES. 19A)	
1=YES.....	722
2=NO.....	5,153
8=BLANK, BUT APPLICABLE.....	26

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 106 WHAT LANGUAGE(S)? (QUES. 19B)	
0=GERMAN.....	25
1=ITALIAN.....	31
2=FRENCH.....	81
3=POLISH.....	6
4=RUSSIAN.....	1
5=SPANISH.....	437
6=CHINESE.....	8
7=OTHER LANGUAGE.....	127
8=BLANK, BUT APPLICABLE.....	32
9=NOT APPLICABLE.....	5,153
POS. 107-108 WHICH OF THESE INCOME GROUPS REPRESENTS YOUR TOTAL COMBINED FAMILY INCOME FOR THE PAST 12 MONTHS? (QUES. 20) (SEE DETAILED NOTE)	
11= UNDER \$ 1,000.....	81
12=\$ 1,000-\$ 1,999.....	111
13=\$ 2,000-\$ 2,999.....	166
14=\$ 3,000-\$ 3,999.....	202
15=\$ 4,000-\$ 4,999.....	210
16=\$ 5,000-\$ 5,999.....	179
17=\$ 6,000-\$ 6,999.....	158
18=\$ 7,000-\$ 9,999.....	989
19=\$10,000-\$14,999.....	1,201
20=\$15,000-\$19,999.....	946
21=\$20,000-\$24,999.....	684
22=\$25,000 AND OVER.....	758
88=BLANK, BUT APPLICABLE.....	216
POS. 109-112 DURING THE PAST 12 MONTHS, HOW MUCH MONEY DID YOU AND ALL MEMBERS OF YOUR FAMILY RECEIVE IN WAGES OR SALARIES BEFORE DEDUCTIONS? (QUES. 21)	
0000-6999=AMOUNT.....	1,065
8888=BLANK, BUT APPLICABLE.....	258
BLANK.....	4,578
POS. 113 SOCIAL SECURITY OR RAILROAD RETIREMENT? (QUES. 22A)	
1=YES.....	175
2=NO.....	968
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 114 UNUSED POSITION	
POS. 115-118 IF YES, HOW MUCH?	
0038-6664=AMOUNT.....	168
8888=BLANK, BUT APPLICABLE.....	187
BLANK.....	5,546
POS. 119 WELFARE PAYMENTS OR OTHER PUBLIC ASSISTANCE? (QUES. 22B)	
1=YES.....	530
2=NO.....	613
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 120 UNUSED POSITION	
POS. 121-124 IF YES, HOW MUCH?	
0080-6800=AMOUNT.....	514
8888=BLANK, BUT APPLICABLE.....	196
BLANK.....	5,191
POS. 125 UNEMPLOYMENT COMPENSATION OR WORKMEN'S COMPENSATION (QUES. 22C)	
1=YES.....	106
2=NO.....	1,036
8=BLANK, BUT APPLICABLE.....	181
BLANK.....	4,578
POS. 126 UNUSED POSITION	
POS. 127-130 IF YES, HOW MUCH?	
0015-5640=AMOUNT.....	94
8888=BLANK, BUT APPLICABLE.....	193
BLANK.....	5,614

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 131 GOVERNMENT EMPLOYEE PENSION OR PRIVATE PENSIONS? (QUES. 22D)	
1=YES.....	5
2=NO.....	1,138
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 132 UNUSED POSITION	
POS. 133-136 IF YES, HOW MUCH?	
1200-3500=AMOUNT.....	5
8888=BLANK, BUT APPLICABLE.....	180
BLANK.....	5,716
POS. 137 DIVIDENDS, INTEREST, OR RENT? (QUES. 22E)	
1=YES.....	35
2=NO.....	1,108
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 138 UNUSED POSITION	
POS. 139-142 IF YES, HOW MUCH?	
0001-2820=AMOUNT.....	31
8888=BLANK, BUT APPLICABLE.....	184
BLANK.....	5,686
POS. 143 NET INCOME FROM THEIR OWN NONFARM BUSINESS, PROFESSIONAL PRACTICE, OR PARTNERSHIP? (QUES. 22F)	
1=YES.....	25
2=NO.....	1,111
3=LOSS.....	5
8=BLANK, BUT APPLICABLE.....	182
BLANK.....	4,578

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 144 UNUSED POSITION	
POS. 145-148 IF YES, HOW MUCH?	
0100-6800=AMOUNT.....	23
8888=BLANK, BUT APPLICABLE.....	189
BLANK.....	5,689
POS. 149 NET INCOME FROM A FARM? (QUES. 22G)	
1=YES.....	14
2=NO.....	1,122
3=LOSS.....	7
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 150 UNUSED POSITION	
POS. 151-154 IF YES, HOW MUCH?	
0075-6500=AMOUNT.....	14
8888=BLANK, BUT APPLICABLE.....	187
BLANK.....	5,700
POS. 155 VETERAN'S PAYMENTS? (QUES. 22H)	
1=YES.....	27
2=NO.....	1,116
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 156 UNUSED POSITION	
POS. 157-160 IF YES, HOW MUCH?	
0212-6000=AMOUNT.....	26
8888=BLANK, BUT APPLICABLE.....	181
BLANK.....	5,694

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 161 ALIMONY, CHILD SUPPORT, OR CONTRIBUTIONS FROM PERSONS NOT LIVING IN HOUSEHOLD? (QUES. 22I)	
1=YES.....	124
2=NO.....	1,018
8=BLANK, BUT APPLICABLE.....	181
BLANK.....	4,578
POS. 162 UNUSED POSITION	
POS. 163-166 IF YES, HOW MUCH?	
0020-6000=AMOUNT.....	119
8888=BLANK, BUT APPLICABLE.....	186
BLANK.....	5,596
POS. 167 ANY OTHER INCOME? (QUES. 22J)	
1=YES.....	34
2=NO.....	1,109
8=BLANK, BUT APPLICABLE.....	180
BLANK.....	4,578
POS. 168 UNUSED POSITION	
POS. 169-172 IF YES, HOW MUCH?	
0160-5000=AMOUNT.....	33
8888=BLANK, BUT APPLICABLE.....	181
BLANK.....	5,687
POS. 173-176 TOTAL AMOUNT (QUES. 21 & 22)	
0100-6999=AMOUNT.....	1,037
8888=BLANK, BUT APPLICABLE.....	286
BLANK.....	4,578
POS. 177 CHECK ITEM B	
2=FOOD STAMPS AVAILABLE.....	5,822
4=BOTH FOOD STAMPS AND COMMODITIES.....	79

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 178 ARE YOU CERTIFIED TO PARTICIPATE IN THE FOOD STAMP PROGRAM? (QUES. 23A)	
1=YES.....	958
2=NO.....	4,705
8=BLANK, BUT APPLICABLE.....	1
9=DON'T KNOW.....	237
POS. 179 ARE YOU BUYING FOOD STAMPS NOW? (QUES. 23B)	
1=YES, REGULARLY.....	744
2=YES, OCCASIONALLY.....	42
3=NO.....	157
8=BLANK, BUT APPLICABLE.....	16
BLANK.....	4,942
POS. 180 WHAT IS THE MAIN REASON YOU AREN'T PARTICIPATING IN THE PROGRAM? (QUES. 23C)	
1=NO NEED.....	23
2=NOT ENOUGH MONEY AT THE TIME.....	38
3=NO TRANSPORTATION.....	4
4=PRIDE.....	10
5=OTHER.....	70
8=BLANK, BUT APPLICABLE.....	28
BLANK.....	5,728
POS. 181 ARE YOU CERTIFIED FOR THE COMMODITY DISTRIBUTION PROGRAM? (QUES. 24A)	
1=YES.....	8
2=NO.....	69
9=DO NOT KNOW.....	2
BLANK.....	5,822
POS. 182 ARE YOU RECEIVING COMMODITY FOODS NOW FOR YOUR FAMILY? (QUES. 24B)	
1=YES, REGULARLY.....	2
3=NO.....	6
BLANK.....	5,893

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED		CONTROL COUNTS
POS. 183	WHY AREN'T YOU PARTICIPATING IN THE PROGRAM? (QUES. 24C)	
	2=NO TRANSPORTATION.....	2
	3=PRIDE.....	2
	4=OTHER.....	2
	BLANK.....	5,895
POS. 184-185	CONTROL RECORD - DATE OF EXAM MONTH	
	01-12.....	5,901
POS. 186-187	CONTROL RECORD - DATE OF EXAM DAY	
	01-31.....	5,901
POS. 188-189	CONTROL RECORD - DATE OF EXAM YEAR	
	76-80.....	5,901
POS. 190-191	AGE IN YEARS (AT EXAMINATION)	
	04-20 YEARS.....	5,901
POS. 192-205	UNUSED POSITIONS	
POS. 206	RACE-SEX RECODE FOR SAMPLE PERSON (SEE DETAILED NOTE FOR POS. 056)	
	1=MALE, WHITE.....	2,482
	2=MALE, BLACK.....	469
	3=MALE, OTHER.....	86
	4=FEMALE, WHITE.....	2,299
	5=FEMALE, BLACK.....	515
	6=FEMALE, OTHER.....	50
POS. 207	FARM, NON-FARM RECODE FOR SAMPLE PERSON (SEE DETAILED NOTE)	
	1=FARM.....	314
	2=NON-FARM.....	5,587

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 208 INTERVIEW STATUS	
1=INTERVIEWED.....	5,901
POS. 209 REGION (SEE DETAILED NOTE)	
1=NORTHEAST.....	1,238
2=MIDWEST.....	1,617
3=SOUTH.....	1,623
4=WEST.....	1,423
POS. 210-212 POVERTY INDEX (X.XX) (SEE DETAILED NOTE)	
002-769 AS GIVEN.....	5,685
999-UNKNOWN.....	216
POS. 213-246 UNUSED POSITIONS	
HEAD OF HOUSEHOLD DATA IN POSITIONS 247-281 -----	
POS. 247-248 AGE IN YEARS AT INTERVIEW (QUES. 3)	
15-89 YEARS (100 OR MORE CODED AS 99).....	5,901
POS. 249-250 UNUSED POSITIONS	
POS. 251-252 DATE OF BIRTH-MONTH (QUES. 2)	
01-12 MONTH.....	5,879
88=BLANK, BUT APPLICABLE.....	22
POS. 253-254 DATE OF BIRTH-YEAR	
00-99 YEAR	5,894
88=BLANK, BUT APPLICABLE.....	7
POS. 255 SEX (QUES. 4)	
1=MALE.....	4,663
2=FEMALE.....	1,238

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 256 RACE (QUES. 5) (SEE DETAILED NOTE FOR POS. 056)	
1=WHITE.....	4,791
2=BLACK.....	976
3=OTHER.....	134
POS. 257-258 IN WHAT STATE WAS HE/SHE BORN? (QUES. 6) (SEE DETAILED NOTE FOR POS. 057-058)	
01-97.....	5,856
88=BLANK, BUT APPLICABLE.....	45
POS. 259 IS HE/SHE NOW MARRIED, WIDOWED, DIVORCED, SEPARATED, OR NEVER MARRIED? (QUES. 7)	
1=UNDER 17.....	3
2=MARRIED.....	4,531
3=WIDOWED.....	223
4=DIVORCED.....	473
5=SEPARATED.....	364
6=NEVER MARRIED.....	296
8=BLANK, BUT APPLICABLE.....	11
POS. 260-261 NATIONAL ORIGIN OR ANCESTRY? (QUES. 8)	
01=COUNTRIES OF CENTRAL OR SOUTH AMERICA.....	44
02=CHICANO.....	22
03=CUBAN.....	17
04=MEXICAN.....	112
05=MEXICANO.....	38
06=MEXICAN-AMERICAN.....	157
07=PUERTO RICAN.....	84
08=OTHER SPANISH.....	26
09=OTHER EUROPEAN, SUCH AS GERMAN, FRENCH, ENGLISH, IRISH...	3,889
10=BLACK, NEGRO OR AFRO-AMERICAN.....	935
11=AMERICAN INDIAN OR ALASKAN NATIVE.....	103
12=ASIAN OR PACIFIC ISLANDER SUCH AS CHINESE, JAPANESE, KOREAN, PHILIPPINO, SAMOAN.....	110
13=ANOTHER GROUP NOT LISTED.....	266
88=BLANK, BUT APPLICABLE.....	98
POS. 262-263 WHAT WAS THE HIGHEST GRADE OR YEAR OF SCHOOL HE/SHE HAS EVER ATTENDED (QUES. 9A)	
00=NONE (REGARDLESS OF AGE).....	35
21-28=ELEMENTARY GRADES (1-8).....	955
31-34=HIGH SCHOOL (1-4).....	3,125
41-45=COLLEGE (1-5+).....	1,727
88=BLANK, BUT APPLICABLE.....	59

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 264 DID HE/SHE FINISH THE GRADE YEAR? (QUES. 9B)	
1=YES.....	4,356
2=NO.....	1,391
8=BLANK, BUT APPLICABLE.....	119
BLANK.....	35
POS. 265 WHAT WAS HE/SHE DOING MOST OF THE PAST 12 MONTHS? (QUES. 10A)	
1=WORKING.....	4,786
2=KEEPING HOUSE.....	558
3=SOMETHING ELSE.....	527
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	3
POS. 266 WHAT WAS HE/SHE DOING? (QUES. 10B)	
1=LAYOFF.....	32
2=RETIRED.....	82
3=STUDENT.....	155
4=ILL.....	47
5=STAYING HOME.....	17
6=LOOKING FOR WORK.....	51
7=UNABLE TO WORK.....	114
8=BLANK, BUT APPLICABLE.....	27
0=OTHER.....	29
BLANK.....	5,347
POS. 267 DID HE/SHE WORK AT A JOB OR BUSINESS DURING THE PAST THREE MONTHS? (QUES. 10C)	
1=YES.....	205
2=NO.....	880
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	4,789
POS. 268 WHEN HE/SHE WAS WORKING, DID HE/SHE USUALLY WORK FULL OR PART TIME? (QUES. 10D)	
1=FULL TIME.....	4,721
2=PART TIME.....	270
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	883

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 269 DID HE/SHE WORK AT ANY TIME LAST WEEK OR THE WEEK BEFORE NOT COUNTING WORK AROUND THE HOUSE? (QUES. 11A)	
1=YES.....	4,647
2=NO.....	344
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	883
POS. 270 EVEN THOUGH HE/SHE DID NOT WORK DURING THAT TIME DOES HE/SHE HAVE A JOB OR BUSINESS? (QUES. 11B)	
1=YES.....	174
2=NO.....	1,050
8=BLANK, BUT APPLICABLE.....	27
BLANK	4,650
POS. 271 WAS HE/SHE LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11C)	
1=YES.....	274
2=-NO.....	950
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	4,650
POS. 272 WHICH-LOOKING FOR WORK OR ON LAYOFF FROM A JOB? (QUES. 11D)	
1=LOOKING.....	200
2=LAYOFF.....	57
3=BOTH.....	17
8=BLANK, BUT APPLICABLE.....	27
BLANK.....	5,600
POS. 273-275 WHAT KIND OF INDUSTRY OR BUSINESS IS THIS? (QUES. 12B) (SEE DETAILED NOTE FOR POSITIONS 73-75)	
017-998 (LAST DIGIT 7,8,9).....	4,932
000=BLANK, BUT APPLICABLE.....	159
BLANK.....	810
POS. 276-278 WHAT KIND OF WORK WAS HE/SHE DOING? (QUES. 12C) (SEE DETAILED NOTE FOR POS. 73-75, 76-78)	
001-992=OCCUPATION (LAST DIGIT 0-6).....	4,926
000=BLANK, BUT APPLICABLE.....	165
BLANK.....	810

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 279 WAS HE/SHE AN EMPLOYEE OF A PRIVATE COMPANY, BUSINESS, OR INDIVIDUAL FOR WAGES, SALARY, OR COMMISSION? (QUES. 12E)	
1=PRIVATE.....	3,612
2=A FEDERAL GOVT EMPLOYEE.....	282
3=A STATE GOVT EMPLOYEE.....	197
4=A LOCAL GOVT EMPLOYEE.....	352
5=INCORPORATED-OWN.....	123
6=SELF-EMPLOYED (OR FARM).....	454
7=WORKING WITHOUT PAY IN FAMILY BUSINESS OR FARM.....	1
8=NEVER WORKED.....	11
0=BLANK, BUT APPLICABLE.....	59
BLANK.....	810
POS. 280 DID HE/SHE EVER SERVE IN THE ARMED FORCES OF THE UNITED STATES? (QUES. 13A)	
1=YES.....	2,229
2=NO.....	3,603
8=BLANK, BUT APPLICABLE.....	66
BLANK.....	3
POS. 281 WHEN DID HE/SHE SERVE? (QUES. 13B)	
1=VIETNAM.....	721
2=KOREAN WAR.....	543
3=WORLD WAR II.....	378
5=POST VIETNAM.....	93
6=OTHER SERVICE.....	464
8=BLANK, BUT APPLICABLE.....	66
9=DO NOT KNOW.....	30
BLANK.....	3,606

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
---	-------------------

SAMPLE WEIGHT DATA, POSITIONS 282-323

(SEE DETAILED NOTE FOR POS. 282-326)

POS. 282-287	EXAMINED FINAL WEIGHT	
	001433-053585.....	5,901
POS. 288-293	MEDICAL HISTORY INTERVIEW FINAL WEIGHT	
	001324-054472.....	5,901
POS. 294-299	GLUCOSE TOLERANCE TEST FINAL EXAMINED WEIGHT	
	000000.....	5,901
POS. 300-305	LEAD FINAL EXAMINED WEIGHT	
	001433-075086.....	3,860
	000000.....	2,041
POS. 306-311	CARBOXYHEMOGLOBIN FINAL EXAMINED WEIGHT	
	002546-072775.....	2,968
	000000.....	2,933
POS. 312-317	BILE ACIDS FINAL EXAMINED WEIGHT	
	000000.....	5,901
POS. 318-323	UNUSED POSITIONS	
POS. 324-325	STRATA	
	01-32.....	5,901

TAPE POSITION, ITEM DESCRIPTION, CODES CONTINUED	CONTROL COUNTS
POS. 326 PSEUDO PRIMARY SAMPLING UNITS	
1 OR 2.....	5,901
POS. 327 POVERTY/NON-POVERTY SEGMENTS (SEE DETAILED NOTE)	
1=NON-POVERTY.....	2,774
2=POVERTY.....	3,127
POS. 328-400 UNUSED POSITIONS	

D.TAPE DESCRIPTION (CONTINUED)

2. AUDIOMETRIC AIR CONDUCTION TEST DATA, AGES 4-19 YEARS

NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

(NHANES II - 1976-80)

TAPE POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
401-404	CATALOG NUMBER: 5306		Numbers in this column reflect the preprinted circled numbers shown on the source document.
405-408	<u>Unused Positions</u>		
409-413	<u>Audiometer Number</u> 20725, 20732, 20765, 20768, 20856, 20861, 21244 - As given 88888 - Blank, but applicable Blank	5,784 86 31	Audiometry Recording Form 101
414-415	<u>Examiner Number</u> 02-25 - As given 88 - Blank, but applicable Blank	5,826 44 31	102
416-417	<u>Unused Positions</u>		
418-419	<u>1000 Hertz -- Right Ear</u> <u>Retest right with masking on left</u> 15-90 - As given in decibels 88 - Blank, but applicable Blank	11 3 5,887	103
420-422	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,717 153 31	104

TAPE POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
423-424	<u>1000 Hertz -- Left Ear</u> <u>Retest left ear with masking on right</u> 25-99 - As given in decibels 88 - Blank, but applicable Blank	10 2 5,889	Audiometry Recording Form 105
425-427	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,714 156 31	106
428-429	<u>2000 Hertz -- Right Ear</u> <u>Retest right ear with masking on left</u> 15-80 - As given in decibels 88 - Blank, but applicable Blank	11 2 5,888	107
430-432	<u>Hearing Level</u> 000 - 099 As given in decibels 888 - Blank, but applicable Blank	5,713 157 31	108
433-434	<u>2000 Hertz -- Left Ear</u> <u>Retest left with masking on right</u> 25-99 - As given in decibels 88 - Blank, but applicable Blank	10 - 5,891	109
435-437	<u>Hearing Level</u> 000-099 - As given in decibels 888 Blank, but applicable Blank	5,711 159 31	110

TAPE POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
438-439	<u>4000 Hertz -- Right Ear</u> <u>Retest right with masking on left</u> 25-90 - As given in decibels 88 - Blank, but applicable Blank	16 2 5,883	Audiometry Recording Form 111
440-442	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,709 161 31	112
443-444	<u>4000 Hertz -- Left Ear</u> <u>Retest left with masking on right</u> 15-99 - As given in decibels 88 - Blank, but applicable Blank	18 3 5,880	113
445-447	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,711 159 31	114
448-449	<u>500 Hertz -- Right Ear</u> <u>Retest right with masking on left</u> 10-85 - As given in decibels 88 - Blank, but applicable Blank	11 - 5,890	115
450-452	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,707 163 31	116

TAPE POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
	<u>500 Hertz -- Left Ear</u>		Audiometry Recording Form
453-454	<u>Retest left with masking on right</u> 30-99 - As given in decibels 88 - Blank, but applicable Blank	11 2 5,888	117
455-457	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,709 161 31	118
	<u>Repeated 1000 Hertz -- Right Ear</u>		
458-459	<u>Retest right with masking on left</u> 40-85 - As given in decibels 88 - Blank, but applicable Blank	8 2 5,891	119
460-462	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,706 164 31	120
	<u>Repeated 1000 Hertz -- Left Ear</u>		
463-464	<u>Retest left with masking on right</u> 25-99 - As given in decibels 88 - Blank, but applicable Blank	10 2 5,889	121
465-467	<u>Hearing Level</u> 000-099 - As given in decibels 888 - Blank, but applicable Blank	5,707 163 31	122

TAPE POSITIONS	ITEM DESCRIPTION AND CODES	CONTROL COUNTS	NHANES II DATA SOURCE OR NOTES
468-471	<u>Conditions Affecting Test Results</u> <u>0000-0234 - right justified with leading zeros,</u> <u>where:</u> 1 - None 2 - Cold or sinusitis now 3 - Ear discharge 4 - Ringing or other noises in ears 8888 - Blank, but applicable Blank	5,868 2 31	Audiometry Recording Form 123
472-475	<u>0000-5678 - right justified with leading zeros,</u> <u>where:</u> 5 - Equipment defect 6 - Cold or sinusitis within one week 7 - Earache within week 8 - Other, describe 8888 - Blank, but applicable Blank	5,868 2 31	124
476-479	Unused Positions		
480	<u>Dummy Record Flag</u> 1 - Dummy Blank - Not dummy	31 5,870	See Detailed Notes

IV. DETAILED NOTES

TAPE POSITION 11

Size of Place

Size of place classification was derived from the 1970 decennial census of the population. According to the definition used in the 1970 census, the urban population comprised all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs (except Alaska), villages and towns (except towns in New York, New England States, and Wisconsin), but excluding those persons living in the rural portions of extended cities; (b) unincorporated places of 2,500 inhabitants or more; and (c) other territories included in urbanized areas. The remaining population was classified as rural.

Urban areas are further classified by population size for places within urbanized areas and other places outside urbanized areas.

TAPE POSITION 12

SMSA-Not SMSA

Except in New England, a Standard Metropolitan Statistical Area is basically a county or a group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties containing such a city or cities, contiguous counties are included in an SMSA if, according to the 1970 census, they are socially and economically integrated with the central city. Each SMSA must include at least one central city, and the complete title of an SMSA identifies the central city or cities. In New England, SMSA's consist of towns and cities, rather than counties.

TAPE POSITIONS 37-41

Family Unit Sequence Number

All related sample persons in the same family unit have the same computer-generated family unit code. This will enable analysis of individual family units.

TAPE POSITIONS 56, 206, AND 256

Race

The race of the respondent was marked by observation. The interviewers were instructed to assume that the race of all related persons was the same as the respondent unless otherwise learned. The race categories were "White", "Black" or "Other". If the appropriate category could not be marked by observation, then race was asked. Interviewers were instructed to record persons who responded with something other than White or Black, such as Japanese, Chinese, American Indian, Korean, Hindu, Eskimo, etc. as "Other" and to include Mexicans, Puerto Ricans and other persons of Latin American descent in "White" unless definitely Black, American Indian, or of other nonwhite race.

TAPE POSITIONS 57-58 AND 257-258

United States

<u>Name of Place</u>	<u>Code</u>
Alabama.....	01
Alaska.....	02
Arizona.....	04
Arkansas.....	05
California.....	06
Colorado.....	08
Connecticut.....	09
Delaware.....	10
District of Columbia.....	11
Florida.....	12
Georgia.....	13
Hawaii.....	15
Idaho.....	16
Illinois.....	17
Indiana.....	18
Iowa.....	19
Kansas.....	20
Kentucky.....	21
Louisiana.....	22
Maine.....	23
Maryland.....	24
Massachusetts.....	25
Michigan.....	26
Minnesota.....	27
Mississippi.....	28
Missouri.....	29
Montana.....	30
Nebraska.....	31
Nevada.....	32
New Hampshire.....	33
New Jersey.....	34
New Mexico.....	35
New York.....	36
North Carolina.....	37
North Dakota.....	38
Ohio.....	39
Oklahoma.....	40
Oregon.....	41
Pennsylvania.....	42
Rhode Island.....	44
South Carolina.....	45
South Dakota.....	46
Tennessee.....	47
Texas.....	48

TAPE POSITIONS 57-58 AND 257-258 (cont.)

<u>Name of Place</u>	<u>Code</u>
Utah.....	49
Vermont.....	50
Virginia.....	51
Washington.....	53
West Virginia.....	54
Wisconsin.....	55
Wyoming.....	56

Outlying Areas of the United States

<u>Name of Place</u>	<u>Code</u>	<u>Description</u>
American Samoa	60	U.S. territory in the Pacific
Canal Zone	61	Territory in Panama leased by U.S.
Canton and Enderbury Island	62	Under common US-UK administration
Guam	66	U.S. territory in the Pacific
Johnston Atoll		U.S. territory in the Pacific, includes Sand Island
Midway Islands	71	U.S. territory in the Pacific
Puerto Rico	72	Commonwealth associated with the U.S.
Swan Islands	74	U.S. territory in the Carribean
Trust Territories of the Pacific Islands	75	U.S. administered, includes Caroline, Mariana, and Marshall Island groups
U.S. Miscellaneous Carribean Islands	76	Includes Navassa Islands, Quito Sueno Bank, Roncador Cay, Serrana Bank, Serranilla Bank
U.S. Miscellaneous Pacific Islands	77	Includes Kingman Reef, Howland, Baker and Jarvis Islands, Palmyra Atoll
Virgin Islands	78	U.S. territory in the Carribean
Wake Island	79	U.S. territory in the Pacific

Not United States

North America (other than U.S.)	91
South America	92
Europe	93
Africa	94
Asia	95
Australasia	96
Pacific Islands	97

TAPE POSITIONS 73-75, 76-78, 273-275 AND 276-278

Industry and Occupation Codes

Occupation may be defined as the principal job or business. For this survey, the principal job or business of a respondent is defined in one of the following ways: if the person worked during the two week interview period or had a job or business, the question concerning occupation (or work) applies to the job during that period. If the respondent held more than one job, the question is directed to the one at which the most time was spent. It refers to the one considered most important when equal time is spent at each job. A person who has not begun work at a new job, is looking for work, or is on layoff from work is questioned about the last full-time civilian job. A full-time job is defined as one at which the person spent 35 or more hours per week and which lasted two consecutive weeks or more. A person who has a job but has not yet reported to it or a person who has never had a job or business is classified as a "new worker".

The 1970 census of population Alphabetical Index of Industries and Occupations was used in the coding of both the industry and occupation (Library of Congress Number 74-612012, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock Number 0301-2283).

TAPE POSITIONS 107-108

Family Income Group

The respondent was handed a card with twelve income ranges listed as Group A to Group L and asked "Which of these income groups represents your total combined family income for the past 12 months, that is, yours, your ...'s, etc? Include income from all sources such as wages, salaries, social security or retirement benefits, help from relatives, rent from property and so forth."

If the respondent answered Group A through G, that is with an income less than \$7,000, then questions 21 and 22 detailing exact sources and amounts of income were asked; otherwise, these questions were skipped.

No effort was made to reconcile amounts reported in detailed questions 21 and 22 with the categorical response to the family income group question. During the survey time period no adjustments to the income groups or \$7,000 value were made to account for inflation.

TAPE POSITION 207

Farm, nonfarm

This position contains a recode, which combines data on land use (position 25), size (position 26), and amount of sales of farm produce and livestock (positions 27 and 28).

Code 1: Farm: Rural land (coded 2 in position 25) which consisted of 10 or more acres (coded 1 in position 26) with crop sales of \$50 or more (coded 1 in position 27).

OR

Rural land (coded 2 in position 25) with crop sales of \$250 or more (coded 1 in position 28).

Code 2: Nonfarm: All other rural land (coded 2 in position 25) as well as land classified as urban (coded 1 in position 25).

TAPE POSITION 209

Region

The United States was divided into four broad geographic regions of approximately equal population. Those regions, which deviate somewhat from the groups used by the Bureau of Census, are as follows:

<u>Region</u>	<u>States Included</u>
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania
South	Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas
Midwest	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri
West	Washington, Oregon, California, Nevada, New Mexico, Arizona, Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, Hawaii

TAPE POSITIONS 210-212

Poverty Index

Income status was determined by the Poverty Income Ratio (PIR). Poverty statistics published in the Bureau of the Census reports 9-13 were based on the poverty index developed by the Social Security Administration (SSA) in 1964. (For a detailed discussion of the SSA poverty standards, see references 14 and 15.) Modifications in the definition of poverty were adopted in 1969. 16 The standard data series in poverty for statistical use by all executive departments and establishments has been established.17

The two components of the PIR are the total income of the household (numerator: the median of the income group for incomes \$7,000 and above; the sum of the component parts of the income questions for incomes under \$7,000) and a multiple of the total income necessary to maintain a family with given characteristics on a nutritionally adequate food plan 9-13 (denominator). The dollar value of the denominator of the PIR is constructed from a food plan (economy plan) necessary to maintain minimum recommended daily nutritional requirements. The economy plan is designated by the U.S. Department of Agriculture for "emergency or temporary use when funds are low."

For families of three or more persons, the poverty level was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was adjusted by the relatively higher fixed expenses of these smaller households.

The denominator or poverty income cutoff adjusts the family poverty income maintenance requirements by the family size, the sex of the family head, the age of the family head in families with one or two members, and the place of residence (farm, nonfarm). Annual revisions of the poverty income cutoffs are based on the changes in the average cost of living as reflected in the Consumer Price Index.

As shown in the tables, the annual income considered to be the poverty level increases as the family size increases. A family with any combination of characteristics and with the same income as shown in the table has been designated as having a PIR or poverty level of 1.0. The same family with twice the income found in the table would have a PIR of 2.0. Ratios of less than 1.0 can be described as "below poverty" and ratios greater than or equal to 1.0, as "at or above poverty".

Poverty thresholds are computed on a national basis only. No attempt has been made to adjust these thresholds for regional, State, or other variations in the cost of living (except for the farm, nonfarm difference). None of the noncash public welfare benefits such as food stamp bonuses are included in the income of the low income families receiving these benefits. PIR has been adjusted by year (see tables) and accounts in some part for inflation.

A. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1976, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	TOTAL (DOLLARS)	NONFARM			FARM		
		TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	2 877	2 884	3 016	2 788	2 438	2 532	2 548
14 to 64 years.....	2 954	2 959	3 069	2 840	2 542	2 608	2 413
65 years and over.....	2 720	2 730	2 758	2 722	2 322	2 344	2 313
2 persons.....	5 688	3 711	3 721	3 660	3 128	3 133	3 033
Head 14 to 64 years.....	3 806	3 826	3 846	3 733	3 267	3 271	3 159
Head 65 years and over.....	3 417	3 445	3 447	3 428	2 928	2 928	2 922
3 persons.....	4 515	4 540	4 565	4 414	3 858	3 864	3 734
4 persons.....	5 786	5 815	5 818	5 790	4 950	4 953	4 840
5 persons.....	6 838	6 876	6 884	6 799	5 870	5 871	5 847
6 persons.....	7 706	7 760	7 766	7 709	6 585	6 584	6 607
7 persons or more.....	9 505	9 588	9 622	9 375	8 072	8 068	8 428

B. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1977, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	TOTAL (DOLLARS)	NONFARM			FARM		
		TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	3 067	3 075	3 214	2 969	2 588	2 672	2 498
14 to 64 years.....	3 147	3 152	3 267	3 023	2 709	2 776	2 569
65 years and over.....	2 895	2 906	2 936	2 898	2 475	2 495	2 563
2 persons.....	3 928	3 951	3 961	3 907	3 318	3 325	3 176
Head 14 to 64 years.....	4 054	4 072	4 095	3 981	3 466	3 474	3 278
Head 65 years and over.....	3 637	3 666	3 670	3 646	3 128	3 131	3 079
3 persons.....	4 806	4 833	4 860	4 708	4 093	4 110	3 893
4 persons.....	6 157	6 191	6 195	6 162	5 273	5 274	5 213
5 persons.....	7 279	7 320	7 329	7 238	6 247	6 247	6 237
6 persons.....	8 208	8 261	8 268	8 197	7 026	7 026	7 040
7 persons or more.....	10 137	10 216	10 249	9 995	8 708	8 706	8 738

C. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1978, BY SIZE OF FAMILY AND SEX OF HEAD, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	TOTAL (DOLLARS)	NONFARM			FARM		
		TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)	TOTAL (DOLLARS)	MALE HEAD (DOLLARS)	FEMALE HEAD (DOLLARS)
1 person (unrelated individual)...	3 302	3 311	3 460	3 196	2 795	2 898	2 690
14 to 64 years.....	3 386	3 392	3 516	3 253	2 913	2 987	2 764
65 years and over.....	3 116	3 127	3 159	3 118	2 661	2 685	2 650
2 persons.....	4 225	4 249	4 258	4 206	3 578	3 582	3 497
Head 14 to 64 years.....	4 363	4 383	4 407	4 286	3 731	3 737	3 614
Head 65 years and over.....	3 917	3 944	3 948	3 923	3 352	3 354	3 313
3 persons.....	5 178	5 201	5 231	5 065	4 413	4 430	4 216
4 persons.....	6 628	6 662	6 665	6 632	5 681	5 683	5 622
5 persons.....	7 833	7 880	7 888	7 806	6 714	6 714	6 700
6 persons.....	8 825	8 891	8 895	8 852	7 541	7 543	7 462
7 persons or more.....	10 926	11 002	11 038	10 765	9 373	9 386	8 813

D. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1979, BY SIZE AND TYPE OF FAMILY AND FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	TOTAL (DOLLARS)	NONFARM			FARM		
		TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HHLDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)
1 person (unrelated individual)...	3 683	3 689	3 556	3 855	3 138	3 001	3 256
15 to 64 years.....	3 773	3 778	3 619	3 912	3 254	3 076	3 324
65 years and over.....	3 472	3 479	3 469	3 515	2 963	2 948	2 988
2 persons.....	4 702	4 725	4 669	4 737	3 987	3 917	3 991
Householder 15 to 64 years.....	4 858	4 878	4 762	4 905	4 156	4 027	4 163
Householder 65 years and over...	4 364	4 390	4 362	4 394	3 730	3 686	3 732
3 persons.....	5 763	5 784	5 624	5 820	4 917	4 680	4 928
4 persons.....	7 386	7 412	7 381	7 416	6 329	6 261	6 332
5 persons.....	8 736	8 775	8 690	8 785	7 492	7 509	7 492
6 persons.....	9 849	9 914	9 843	9 922	8 424	8 309	8 428
7 persons or more.....	12 212	12 280	12 037	12 322	10 533	10 178	10 547

¹INCLUDES FEMALE UNRELATED INDIVIDUALS.²INCLUDES MALE UNRELATED INDIVIDUALS.

E. WEIGHTED AVERAGE THRESHOLDS--POVERTY CUTOFFS IN 1980, BY SIZE AND TYPE OF FAMILY, BY FARM-NONFARM RESIDENCE

SIZE OF FAMILY UNIT	TOTAL (DOLLARS)	NONFARM			FARM		
		TOTAL (DOLLARS)	FAMILIES WITH FEMALE HILDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)	TOTAL (DOLLARS)	FAMILIES WITH FEMALE HILDR, NO HUSBAND PRESENT ¹ (DOLLARS)	ALL OTHER FAMILIES ² (DOLLARS)
1 person (unrelated individual)...	4 184	4 190	4 037	4 379	3 559	3 392	3 680
15 to 64 years.....	4 286	4 290	4 109	4 441	3 693	3 492	3 775
65 years and over.....	3 941	3 949	3 938	3 990	3 359	3 547	3 392
2 persons.....	5 338	5 363	5 316	5 373	4 502	4 302	4 513
Householder 15 to 64 years.....	5 518	5 537	5 415	5 568	4 714	4 497	4 721
Householder 65 years and over...	4 954	4 983	4 946	4 988	4 233	4 185	4 257
3 persons.....	6 539	6 565	6 386	6 608	5 573	5 271	5 587
4 persons.....	8 385	8 414	8 382	8 418	7 170	7 152	7 170
5 persons.....	9 923	9 966	9 878	9 976	8 472	8 373	8 474
6 persons.....	11 215	11 269	11 227	11 274	9 613	9 168	9 625
7 persons or more.....	13 883	13 955	13 767	13 986	11 915	12 133	11 889

¹INCLUDES FEMALE UNRELATED INDIVIDUALS.

²INCLUDES MALE UNRELATED INDIVIDUALS.

TAPE POSITIONS 282-323

Sample Weights

A multistage estimation procedure was used to calculate the various NHANES II subsample sample weights that are necessary to use in any analysis of the data. The procedure has three basic components: 1) inflation by reciprocals of the probabilities of selection, 2) adjustment for nonresponse, and 3) poststratification ratio adjustment by age-sex-race. A brief description of each component is as follows:

Inflation by reciprocals of the sampling probabilities. Since the survey utilized a three-stage sample design, there were three probabilities of selection: 1) the probability of selecting the PSU, 2) the probability of selecting a segment and housing unit, and 3) the probability of selecting a sample person.

Adjustment for nonresponse. Estimates from the NHANES II data were adjusted to account for sample persons who were not examined. The estimates were inflated by a multiplication factor calculated within five selected income groups, three age groups, four regions, and standard metropolitan statistical area (SMSA) or non-SMSA. The numerator of these factors was the sum of the weights for sample persons resulting from the reciprocal of the probability of selection, and the denominator was the sum of the weights for examined persons also resulting from the reciprocals of the sampling probabilities.

Poststratification by age-sex-race. The estimates were ratio adjusted within each of 76 age-sex-race cells to an independent estimate, provided by the U.S. Bureau of the Census, of the population of each cell as of March 1, 1978, (approximate mid-point of the survey). The ratio adjustment was a multiplication factor of which the numerator was the U.S. population and the denominator was the sum of the weights adjusted for nonresponse for examined persons. This ratio estimation process makes the sample more closely representative of the civilian, noninstitutionalized population of the U.S.

Potential bias of nonresponse. Usually a sizeable number of sample persons who initially are willing to complete the household information and some of the medical history questionnaire subsequently will not participate in the examination. This creates the potential for bias if these persons differ from other sample persons with respect to the variables being studied. Intense efforts were undertaken during NHANES II to develop and implement standard procedures and inducements that would reduce the number of nonrespondents and thereby reduce the potential for bias.

The user needs to be aware of and should explore the potential bias for nonresponse in any analysis of the NHANES II data.

TAPE POSITION 327

Poverty/non-poverty segments

Individuals interviewed during NHANES II were selected by means of a multi-stage, stratified probability sample of loose clusters of households by geographic locations.⁸ Clusters of housing units (segments) were designated as either "poverty" or "nonpoverty" (See Detailed Notes for description of Poverty Index) in the sample selection process to insure adequate representation of low income persons in the sample.

TAPE POSITIONS 418-419, 420-422, 423-424, 425-427, 428-429, 430-432, 433-434, 435-437, 438-439, 440-442, 443-444, 445-447, 448-449, 450-452, 453-454, 455-457, 458-459, 460-462, 463-464, 465-467

Hearing Threshold

Deaf persons who were not tested and persons who had hearing threshold levels of 100 dB or more were coded "99." Persons who had hearing threshold levels of 0 dB or less were coded "00."

TAPE POSITION 480

The term "Dummy Record" refers to a tape record for a respondent who was included in the sample but for whom no Audiometric Air Conduction Test was done. Although demographic data are available for all respondents, positions 409-475 are all blank in dummy records, and position 480 contains a code of "1" to identify such records. If position 480 contains the code "blank", at least some Audiometric Air Conduction Test data were received for that respondent.

V. APPENDIX A
DATA COLLECTION TECHNIQUES AND CONTENT

The plan developed with respect to the content of NHANES II called for the following:

A. QUESTIONNAIRES COMPLETED IN THE HOUSEHOLD

1. Household questionnaire. This questionnaire included for each household member items on family relationships and certain demographic variables such as age, sex, race, education, occupation, and veteran status. Also obtained were information on selected housing characteristics, family income, and an indication of the family's participation in food stamp programs.
2. Medical history questionnaires.
 - a. For each sample person 6 months-11 years of age
This questionnaire included items on birth weight, prematurity, congenital conditions, medication, neurological conditions, lead poisoning, accidents, hospital care, disability, diarrhea, pica, vision, and a variety of chronic conditions. In addition, data were collected on allergies, kidney and bladder disease, anemia, speech and hearing, lung and chest conditions and participation in food programs.
 - b. For each sample person 12-74 years of age
The questionnaire included items on medication, hospital care, tuberculosis, a variety of acute and chronic diseases, tobacco usage, physical activity, weight, height, vision disability, eating and gastrointestinal problems, and participation in food programs. Detailed data were collected on anemia, diabetes, respiratory conditions, hearing and speech, liver and gallbladder conditions, kidney and bladder disease, allergies, hypertension, cardiovascular conditions, stroke and arthritis (stressing middle and upper back and neck problems).

B. QUESTIONNAIRES ADMINISTERED IN THE MOBILE EXAMINATION CENTER

1. Dietary Questionnaires

- a. For each examined person, a 24-Hour Recall was administered by trained dietary interviewers. Specific and quantitative detail of every food or drink consumed during the previous day was recorded and calculated, thus providing estimates of calories, protein, carbohydrates, fat, unsaturated fats, cholesterol, and specific vitamins and minerals consumed.
 - b. For each examined person a Food Frequency questionnaire was administered to ascertain usual patterns of food consumption. Daily and/or weekly consumption of foods within 26 subgroups were recorded. In addition, data were collected on usual vitamin-mineral supplement usage.
 - c. For each person 12-74 years of age a Dietary Supplement form was self-administered and reviewed. This form provided information on special diets, recent medications and barriers to purchasing groceries or eating foods; it does not provide information on vitamin/mineral or other supplements to the diet.
2. Health History Supplement, for persons 12 through 74 years of age, included questions on cardiovascular and respiratory conditions, kidney and bladder disease, and arthritis in addition to those asked in the household Medical History. Also included were questions on pesticide exposure, smoking for persons 12 through 17 years of age, and a menstrual and pregnancy history for females.
3. Medications/Vitamin Usage form collected information on the past week's usage of any medicines, vitamins or minerals for all examined persons.
4. Behavior Questionnaire elicited data on behavior which may be associated with coronary heart disease for examined persons 25 through 74 years of age.

C. EXAMINATION BY PHYSICIAN

A physician performed and recorded the results of a medical examination giving special attention to specified findings related to nutrition, to hearing, to the thyroid gland, and to the cardiovascular, respiratory, neurological and musculoskeletal systems.

D. SPECIAL CLINICAL PROCEDURES AND TESTS

A specially trained health technician carried out the following on examined persons in the designated age ranges:

1. Spirometry trials of examined persons 6 through 24 years of age were digitized and recorded on magnetic tape. Various pulmonary function indicators such as FVC (forced vital capacity), FEV₁ (forced expiratory volume in one second), and peak flow rate were subsequently derived from these data.
2. Electrocardiograms were made on examined persons 25 through 74 years of age. Electrocardiographic signals were digitized and recorded on magnetic tape, providing normative data on amplitude, duration, interval and axis measurements and permitting interpretations of heart disease according to the Minnesota classification code.
3. Body Measurements were made on all examinees and included standing height or recumbent length, depending on age; body weight; triceps and subscapular skinfolds; and several other anthropometric measurements.
4. Puretone audiometry tests were carried out on examined persons between the ages of 4 and 19 years, permitting determination of threshold levels of hearing for frequencies of 500, 1000, 2000, and 4000 Hertz for right and left ears.
5. Speech recording, involving use of tape recording of the subject's repetition of specially developed sentences, was carried out on examined persons between the ages of 4 and 6 years, permitting interpretations as an indication of problems with articulation and language development.

6. Allergy tests, involving skin tests (prick test) with eight common allergens (house dust, alternaria, cat fur, dog fur, ragweed, oak, rye grass, and Bermuda grass). The tests were made on examined persons between the ages of 6 and 74 years, to obtain degrees of skin reaction.

E. X-RAYS

For examined persons 25 through 74 years of age, two x-rays were made. No x-rays were taken of pregnant women and no lumbar x-rays were taken on women under 50 years of age.

1. X-rays of the cervical and lumbar spine were taken to provide evidence of osteoarthritis and degenerative disc disease, and an
2. X-ray of the chest was taken to be used in the diagnosis of respiratory diseases and to serve as a measure of left ventricular enlargement.

F. URINE TESTS

Tests as follows were performed on casual samples of urine:

1. N-Multistix tests for qualitative protein, glucose, ketones, bilirubin, blood, urobilinogen, pH, and bacteriuria (nitrite test) were done for examined persons 6 through 74 years of age.
2. Urinary sediments, including red cells, white cells, and casts, were measured for a subsample of examined adults 20 through 74 years of age.
3. Gonorrhea cultures of urinary sediments were performed for male and female examined persons 12 through 40 years of age. However, of those females who received the Glucose Tolerance Test (GTT), only those 20 through 24 years had the gonorrhea test performed.
4. Analyses for pesticide residue and metabolite levels were carried out on a subsample of examined persons 12 through 74 years of age, including measures of the body burdens from exposure to alkyl phosphate residues and metabolites, carbamate residues, phenolic compound residues and malathion metabolites.

G. TESTS ON BLOOD SAMPLES

Samples of blood provide a broad range of information related to health and nutrition. The particular tests performed varied with the specific target condition and age group as described on page 39 of the Series 1, No. 15 program description.⁸

1. Glucose tolerance test (GTT)

This test involved collection of blood specimens while in a fasting state as well as at one and two hours after glucose challenge. The test was performed on a subsample of examined adults 20 through 74 years of age to provide estimates of the prevalence of diabetes.

2. Tests related to liver function

- a. A post-prandial liver bile acid test was performed to measure the ability of the liver to remove bile acids from the blood. This involved consumption of a food preparation, which induces eventual addition of bile acids to the blood via contraction of the gallbladder, and subsequent collection of blood specimens.
- b. Liver biochemistries performed include bilirubin, SGOT, and alkaline phosphatase tests.

3. Anemia-related laboratory tests

The tests made to characterize anemia consisted of protoporphyrin, iron, total iron binding capacity (TIBC), zinc, copper, red cell folates, serum folates, serum ferritin, B₁₂, and the determination of abnormal hemoglobin.

4. Other nutritional biochemistries

These tests included albumin, Vitamin A, and Vitamin C.

5. Serum lipids

Because of their important relevance to cardiovascular disease, determinations were made of cholesterol, triglycerides, and high density lipoprotein (HDL).

6. Biochemistries for body burden from environmental exposures
Determinations were made of body burden levels of lead and pesticide residues and metabolites. Tests were also performed for carboxyhemoglobin which reflects environmental exposure to carbon monoxide and the individual's smoking habits.
7. Hematology
The hematology included determinations of hemoglobin, hematocrit, red blood cell count, white blood cell count and differential leukocyte analysis, and red blood cell morphology and hemoglobin phenotyping.
8. Kidney function
The only quantitative test for kidney function performed on blood samples was the serum creatinine test.
9. Syphilis
The serology determinations for syphilis included qualitative and quantitative ART, a FTA-ABS and MHA-TP.

APPENDIX B

AUDIOMETRY SCREENING EXAMINATION PROCEDURES

Equipment

- Soundproof room.
- Audiometers: two (2) Beltone, Model 200-C
- Language master: Bell and Howell, Model 1726
- Tape recorder: Revox, Model 77A
- Sound level meter: B&K, Model 2203
- Artificial ear coupler: B&K, Model 4151
- Condenser microphone: B&K, Model 4144 (1")
- Octave band filter: B&K, Model 1613
- Acoustic calibrator: B&K, Model 4230
- Microphone power supply: B&K, Model 2810
- Talk back microphone: B&K, Model 4125 (½")
- Accessories: Microphone adaptor ring, 500 gram weight, prerecorded Language Master Cards, blank magnetic tapes
- Forms: Daily check list, field calibration forms, environmental noise survey form.

Setup

The setup described in this section applies to that used in the examinations and daily checks. For calibration setups refer to the appropriate sections. Turn all equipment off when not in use.

1. Audiometer
 - a. Plug in power cord and press "on" switch to turn on power indicator light.
 - b. Place all switches and controls in "off" position.
 - c. Turn *speech input* control to "tape."
 - d. Turn *channel II gain* control fully counterclockwise.
 - e. Turn *VU meter selector* switch to "channel I."
 - f. Turn *talk back* and *talk over* control fully counterclockwise.
2. Language Master
 - a. Insert plug with two leads into output jack of Language Master.
 - b. Insert phone plug labeled "tape input" into the female jack of a Y connector. Insert the two male plugs of the Y into the tape jack and external input channel II jack located in the rear of the audiometer.
 - c. Turn *volume control* fully clockwise.
3. Tape recorder
 - a. Plug in power cord and turn *power* switch to 7½" speed and small reel indicator. Check to see that the pilot light is on and that there are three cables connected to the rear panel of recorder.

- b. Turn *record function* selector to "aux."
 - c. Turn both *record level* controls fully clockwise.
 - d. Turn *channel selector* switch to "mono."
 - e. Turn second clear knob (from left) to "NAB" and leave the *balance control* in the center position (pointer straight up).
 - f. Depress *channels I and II preselector* buttons.
4. Sound level meter
- a. Insert plug labeled "B & K output" into output jack of sound level meter.
 - b. Screw plug adapter onto meter and insert plug labeled "Mic. Amp." into adapter.
 - c. Attach connector labeled "amp. input" into channel I output of microphone power supply.
 - d. Insert cable from ½" microphone into channel I input of microphone power supply.
 - e. Connect ½" microphone to cable.
 - f. Pull up black knob below indicating meter to turn the power on. Check to see that the power indicator light is flashing.
 - g. Turn the same black knob to "Batt." position. If meter pointer falls within section marked "battery," the batteries are satisfactory for use. Otherwise, replace batteries per instrument instruction manual.

Daily Field Checks - Audiometer

Turn power on and switch to manual mode. Turn *tone* switch to "on" position to turn on the tone indicator light.

1. To check tone quality:
 - a. Set hearing level dial at 40 dB.
 - b. Turn *channel I output* control alternatively to left and right phones.
 - c. Turn frequency dial successively from 500 Hz through 4000Hz while listening through each earphone in turn for purity of tones.
 - d. Check appropriate spaces on the form and note any abnormalities.
2. To check the hearing level control:
 - a. Set the Frequency dial on 2000 Hz.
 - b. Turn the hearing level dial slowly from 20 to 60 dB and back to zero while listening for scratches, abrupt changes in loudness of tone, or for other extraneous signals.
 - c. Check appropriate spaces on the form as each phone is checked and note any abnormal conditions in the "Remarks" section.
3. To check the wires leading to the earphones:
 - a. While wearing the earphones and with the 1000 Hz tone on at 40 dB, shake the wire to each earphone gently and listen for scratches, interruption of the tone, or any other abnormality.
 - b. If the tone is interrupted or changes loudness, tighten the set screws holding the earphone cord in the earphone. If this action does not correct the fault, replace the audiometer.
 - c. It may be necessary to replace an earphone cord from time to time. This can be done by loosening the set screws in the earphone, unplugging the

old earphone cord, plugging in the new cord, and finally tightening up the set screws.

4. The attenuator and frequency dials may slip on the shaft. If this happens, report it under "Remarks" and replace the audiometer.
5. Send any defective unit to EAR-CO for service. If neither audiometer works properly, contact Mr. Kenneth Stewart for instruction.

Equipment Care

The only care the Revox recorder and language master equipment needs on a regular basis is to keep the tape path clean. This is very important because the machine will perform its best only if all parts of the tape path are clean. A soft cotton or linen cloth is most suitable for cleaning. If necessary the cloth may be moistened with a little alcohol. Hard instruments must not be used for cleaning the tape path under any circumstances. The heads should be cleaned carefully. The capstan and pressure roller should be cleaned with a dry cloth. The recorder must never be oiled. At the beginning of the stand the Revox recorder and language master must be degaussed.

1. Procedure for Degaussing.
 - a. Remove all recorded material from room so as not to destroy or damage the recordings.
 - b. Hold the degausser 3 ft away from the head while energizing it.
 - c. Slowly move the degausser towards the heads. Move the tip around the head, capstan, and other metal parts in the tape path.
 - d. Slowly move the degausser away from the machine until it is 3 ft away. At this point, deenergize.
 - e. **WARNING.** Do not leave the degausser energized for more than 4 minutes. Otherwise it will overheat and self destruct.
 - f. The degausser doesn't need to touch the head to degauss it. It just has to be close to it.

Field Calibration

1. General
 - a. Field calibration of both audiometers will be performed at the start of each stand, weekly during the examination period, and at the end of each stand.
 - b. The field calibration report forms give the expected reading at each frequency and the tolerance limits allowed around that reading. The expected readings were determined for each set of field calibration equipment at EAR-CO's laboratory. If a microphone requires replacement, the calibration equipment is to go back to EAR-CO for a determination of new expected readings for the new microphone.
 - c. Reports on these field calibrations are to be made in duplicate. One copy is to be mailed that day to Miss Jean Roberts and the other to EAR-CO.
 - d. If the calibration shows a unit to exceed the specified limits, an independent calibration is to be made by another technician. If both technicians then agree that the audiometer is in calibration, the unit will

be considered satisfactory for use. If the difficulty cannot be resolved, the unit is to be sent to EAR-CO for service.

2. Pure Tone Calibration

- a. To prepare the sound level meter for use:
 - (1) Screw the artificial ear coupler onto the meter case.
 - (2) Unscrew the top half of the coupler.
 - (3) Screw the microphone cartridge (1" diameter) with protective grid onto the bottom half of the coupler.
 - (4) Turn the black knob above the meter to position the number 90 opposite the marker on the meter case. Turn the clear knob to place the red circle over the number 90.
 - (5) Set the function selector to A-Slow.
 - (6) Remove the ½" adaptor from the acoustic calibrator and set the calibrator firmly over the microphone.
 - (7) Press the tone actuator (on side of calibrator) once and release.
 - (8) The sound level meter should read 94 dB on the A scale. If not, use a screw driver (supplied with meter) to turn the adjustment screw to produce the desired reading. (If the tone has disappeared, press actuator again to bring the tone back on.) The sound level meter is now in calibration.
- b. To mount the earphone:
 - (1) Remove the protective grid from the microphone cartridge and screw the adaptor ring onto the cartridge. Take great care not to touch the microphone diaphragm.
 - (2) Screw the top of the coupler back on and remove the capillary pin contained therein.
 - (3) Set the earphone to be tested over the cavity of the coupler, making sure that the earphone rests squarely on the coupler.
 - (4) Place the 500 gram weight on top of the earphone and reinsert the capillary pin.
- c. Calibration procedure:
 - (1) Turn the black knob on the sound level meter until the number 70 on the dial is opposite the marker on the meter case and keep the red circle over 70.
 - (2) Set the audiometer to a frequency of 500 Hz and 70 dB hearing level.
 - (3) Turn the tone switch to "on."
 - (4) Select the earphone under test.
 - (5) Record the sound level meter reading (A-scale) on the report form.

Example: The meter reading is determined as follows:

Red Circle over	70
Meter needle at	<u>6.5</u>
Meter reading is	76.5 dB

Since the expected reading at this frequency is 76.8 dB with a tolerance of ± 4 dB, the audiometer is within calibration at this frequency.

- (6) Continue testing at the other three frequencies indicated in the

report form. In each case the report form provides the appropriate settings for the sound level meter.

(7) To test the other earphone:

Remove the weight and lift the earphone already tested off the coupler. Remove the capillary pin. Place the other phone and weight back on and reinsert capillary pin. Repeat steps (2) through (6).

3. Masking noise calibration

- a. Set up the field calibration equipment as before.
- b. Set function selector on the B & K meter to "C-Slow" position.
- c. Turn the audiometer *channel II* tone switch to "on" to bring tone indicator light on. Turn the *channel I* tone switch "off."
- d. Turn the *Freq. and Input* dial to "N. B. Noise" and *channel I* frequency selector to 500 Hz.
- e. Set the masking level knob at 60 dB as indicated on the form.
- f. Select the earphone under test.
- g. Set the black knob and red circle on the sound level meter at 80 and obtain the reading.

Example: The actual masking signal level at the selected range of frequencies is determined as follows:

Red circle over	80
Meter needle at	<u>2.4</u>
Masking signal level is	82.4 dB

Since the expected reading is 81.7 dB with a tolerance of ± 4 dB, the level of the masking noise is within the specifications in this frequency range.

- h. Repeat the procedure with the channel I frequency selector at other frequencies and other attenuator settings indicated on the form.

Environmental Noise Survey

A noise survey is to be done during the setup day before the start of each stand of examination. One copy of the completed form should be sent immediately to Miss Roberts and one to EAR-CO. Adhere to the following procedures.

1. Screw the 1" microphone (with protective grid in place) directly onto the connector on the B and K sound level meter.
2. Check the battery condition and calibration per previous instructions.
3. Set the selector knob to "Ext. Filt. Slow" position.
4. Set *weighting* switch on the octave filter set to "off."
5. Close both doors to the audiometer room.
6. Turn off all hearing test equipment.
7. Set the black knob to 70.
8. Rotate the *frequency* knob to 31.5
9. Adjust the red circle knob to obtain a meter reading which is somewhat above 0 dB on the meter scale. Read the red circle number and add to it the meter reading.

Example:

Red circle on	60 db
Meter reading	<u>4 db</u>
Environmental noise level	64 db at 31.5 Hz

10. Record the reading on the appropriate form.
NOTE: The meter reading will fluctuate considerably. Try to estimate an average reading after having observed the meter for a moment.
11. Turn the *frequency* knob to 63.
12. Turn the red circle knob to obtain a meter reading as in instruction 9.
13. Proceed through each octave band 125 Hz . . . 8,000 Hz.
14. Under "Comments" explain circumstances, if possible, where the environmental noise levels exceed ANSI allowable levels.

Audiometric Testing Procedures

1. General

At the beginning of each examination session turn on the audiometer at least 10 minutes before performing the daily field check. At the completion of testing, perform a second field check. Both doors to the audiometric room should be closed while testing.

a. Recording

Use the left side of form first when the sample number is even and the right side first when the sample number is odd. Enter the beginning time, audiometer number, and technician number on control record. Indicate which ear will be tested first by circling right ear or left ear on the form. This will check for any bias.

b. Audiometric testing

Perform air condition tests for both ears in the sequence indicated on the recording form. If any part of the test cannot be completed, enter "X" in the appropriate space and indicate the reason under "Condition Affecting Test Results." If other than physical conditions of the examinee have affected any of the audiometric results, explain in the space provided at the right of this section. If any thresholds of 30 dB or greater are obtained, be sure to question the examinee about physical conditions which might contribute to the results and check the appropriate box or boxes under "Condition Affecting Test Results." For a 15 to 19 year old with a 40 dB or greater threshold at 4000 Hz in one or both ears, ask if he has listened to a large amount of amplified music. Please note under number 8 "Other." If the examinee does not respond to 100 dB at any test frequency, record "100+" in the appropriate space.

c. Instructions to examinee

Detailed instructions should be given the examinee to stress the following points: • Once the earphones are placed by the technician, they must not be touched by the examinee. The technician should ask if they are comfortable and readjust if necessary. • Tell the examinee that he will hear tones that are high and low and will become softer and softer until he will have difficulty hearing them. When he hears the tones, he should depress the response button and release it when the tone is no longer heard. Remind him to concentrate very hard when the tones are soft. • Eyeglasses, earrings, chewing gum, wigs, and hair ornaments should be removed if they interfere with proper placement of the headset.

(1) Example of verbal instructions for 7 to 19 year olds.

- (a) We are going to see how well you hear some tones from these earphones.
 - (b) You will hear short tones that are both high and low. They will become softer and softer.
 - (c) Each time you hear a tone, please press this button (technician demonstrates with response button) and when you no longer hear the tone let the button up.
 - (d) Listen carefully when the tone starts to get softer but even if you think you hear it, press the button and I will be able to tell if you hear it.
 - (e) First you will hear the tones in your right/left ear (point) and then in your other ear.
 - (f) If the tone seems to be in this ear (point to nontest ear), please tell me.
 - (g) Remember to press the button when you hear a tone and let it up when you no longer hear it.
 - (h) Do you have any questions? (If so, clarify as necessary.)
- (2) Example of verbal instructions for 4 to 6 year olds.
- (a) (Bring the child into position to face the audiometer. With a 50 dB 1000 Hz tone in one phone, hold it to the child's ear.) We are going to see how well you can hear some tones from these earphones. Listen to this one.
 - (b) Every time I play a tone, the red light goes on. Do you see it? (Demonstrate)
 - (c) If you listen carefully and hear the tone, you can turn it off by pressing this button and making the white light go on. (Indicate by depressing response button.)
 - (d) (Hand the response button to the examinee and present tone, encouraging the child to press the response button. When he does, release the stimulus tone. Repeat the sequence at least once or until you feel that the child understands his task. Reinforce the child's performance with a positive comment.) Good. Now we will play this game while you sit in that chair. (Indicate the chair and hand the child the response button.)
 - (e) (Place the headset on child.) First you will hear the tones in this ear (indicate right or left) and then you will hear them in your other ear.
 - (f) Are you ready?
- (3) Examples of verbal instructions when masking of the better ear is required (when the difference between hearing levels of the two ears is 40 dB or greater at any frequency).
- (a) Now you will hear the tone in your right/left ear (point).
 - (b) At the same time you will hear a noise, like wind, in your other ear (point).
 - (c) The noise is to keep you from hearing the tone in that ear so don't pay any attention to it.
 - (d) I want you to listen for the tones in your right/left ear (point) and press the button whenever you hear them.
 - (e) Do you understand? (If not, clarify as necessary.)

d. Conduction of air conduction hearing test

- (1) Take the examinee into the test room and seat him opposite the examiner but facing away so that he cannot see the examiner's movements or the equipment being operated.
- (2) Close the test room doors.
- (3) Ask the examinee if he has any problems which might affect his hearing—colds, earache, etc. Record these under "Condition Affecting Test Results."
- (4) Repeat the instructions briefly.
- (5) Make sure the ears are not obstructed with cotton before placing the earphones.
- (6) Place the earphones on the examinee and make sure the earphone opening is over the ear canal and that it has a good seal against the examinee's ear. The red earphone is placed on the right ear; blue on the left. Hair should be pushed away from ears before the headset is placed.
- (7) Make sure that the audiometer is ready for the test by checking that it is set in the following manner:

Air Conduction Setup

<i>Channel I</i>	<i>Machine dials</i>	<i>Correct Setting</i>
	Channel I monitor	Off unless using
	Channel I output	Right/left
	ON/OFF toggle switch	ON
	AUTO/manual toggle switch	Manual
	Frequency	1000 Hz.
	Decibels	20 dB

Masking Setup

<i>Channel II</i>	<i>Machine dials</i>	<i>Correct setting</i>
	Channel II output	Off*
	Channel II monitor	Off unless using
	ON/OFF toggle switch	Off*
	AUTO/manual	Manual
	Frequency and Input	N.B. Noise
	Decibels	60 dB

* When masking is required, channel II output should be right/left and the on/off toggle switch is "ON."

NOTE: Dials SISI and Speech-Input have nothing to do with either Air Conduction or Masking testing.

- (8) The 1000 Hz tone is introduced to the first ear to be tested at a level of 20 dB for about 1 second. This should be well within the range of audibility for most examinees and will serve as listening practice.

- If the tone is not heard at 20 dB, increase the level in 10 dB steps until he responds to it.
- (9) When the examinee responds, set the intensity dial 10 dB below the previous stimulus intensity (10 dB) and present the tone for 1 or 2 seconds.
 - (10) The procedure for decreasing the level of the tone in 10 dB steps with at least one presentation per level should be continued until no response is obtained.
 - (11) Then increase the intensity dial 5 dB and present a stimulus.
 - (12) If a response is obtained at this level, the intensity is reduced by 10 dB. If no response is obtained, increase the intensity 5 dB. Always descend 10 dB and count the number of responses at the lowest level while ascending in intensity in 5 dB steps.
 - (13) The threshold recorded is the lowest dial reading at which 50 percent or more of the responses are obtained to ascending presentations—that is, 2 out of 3 or 3 out of 5 trials. Below this level, less than 50 percent response is obtained and above this level, 100 percent response is approached.
 - (14) Enter the proper two-digit entry on the test form. Test the remaining frequencies in the order indicated on the form.
 - (15) Repeat the procedure presenting each successive frequency in the order listed on the examination form to the test ear and then shift to the other ear as indicated on the test form until the pure tone air conduction test has been completed for all frequencies in both ears.
- e. Masking procedure—(when the difference in thresholds between the two ears is 40 dB or greater at the same frequency.)
At any frequency, when the threshold of one ear is poorer than the other ear by 40 dB or more, you must retest the poorer ear using a masking noise in the better ear. When this is necessary, use a masking level of 60 dB no matter what the difference in thresholds is between the two ears. Record these results in the appropriate spaces on the audiometry form.
- f. Procedure necessary for threshold accuracy
- (1) Avoid rhythmic presentation of signals to the examinee. The examinee may respond to the rhythm rather than to the sound. This is especially true of younger persons.
 - (2) Avoid a long, drawn-out search for a threshold which tends to lessen the interest and cooperation of the person being tested and to produce fatigue. If necessary, shift to another frequency and test, then return to the problem frequency later. Note at the bottom of the form any change in the order of the test on the test form.
 - (3) Avoid giving visual or auditory cues when the tone is presented; for example looking at the person each time a tone is presented, making a click with the interrupter switch, or clicking in the intensity dial.
 - (4) Double check the dial reading.
 - (5) Check whether the interrupter switch was at “off” position.
 - (6) Avoid activity which will distract the examinee.
 - (7) Check the response of the examinee occasionally by leaving the tone off for several seconds and then presenting the tone to see if he is responding consistently.
 - (8) Avoid presentation of the test tone for longer than 3 seconds. This may lead to a false response.

- (9) Count only the ascending responses in determining the threshold.
- (10) Avoid being influenced by the threshold obtained for the first cycle tone when obtaining the threshold for the second presentation of this tone.
- (11) Make sure all forms are complete. Record the time the test is finished and the technician number on the control record. When the test is not done or incomplete, record the reason.

Field Calibration of Masking Generator

Date _____

Audiometer No. _____

Location _____

Masking Generator Calibration

Masking generator center frequency	Masking level knob	Setting for		Expected reading "C" slow	Tolerance dB	Actual reading left phone
		Black knob	Red knob			
500	60	80	80	81.7	±3	_____
1000	70	80	80	88.7	±3	_____
2000	70	90	90	94.9	±3	_____
4000	70	80	80	82.0	±3	_____

Note: Each field calibrator (C, D, and E) has the same expected readings for these masking generator signals

Technician

ENVIRONMENTAL NOISE SURVEY (HANES)

Date _____

Location _____

Band center frequency (Hz)	ANSI Max allowable sound pressure level (dB) for no masking at audio zero	Band level dB @ 0.0002u bar	
		Air conditioning OFF	Air conditioning ON
31.5	(35)	_____	_____
63	(35)	_____	_____
125	35	_____	_____
250	35	_____	_____
500	35	_____	_____
1000	35	_____	_____
2000	42	_____	_____
4000	52	_____	_____
8000	62	_____	_____

Comments _____

Technician

Field Calibration of Earphones
For audiometer No ___ Caravan ___

Date _____ Location _____

"C" Calibrator

Audiometer 70 dB at frequency	Setting for		Expected reading "A" slow	ANSI intensity tolerance	Actual reading	
	Black knob	Red circle			Right	Left
500	70	70	79.4	±3 dB		
1000	70	70	76.8	±3 dB		
2000	80	80	80.7	±3 dB		
4000	80	80	85.9	±3 dB		

"D" Calibrator

Audiometer 70 dB at frequency	Setting for		Expected reading "A" slow	ANSI intensity tolerance	Actual reading	
	Black knob	Red circle			Right	Left
500	70	70	79.4	±3 dB		
1000	70	70	76.8	±3 dB		
2000	80	80	80.7	±3 dB		
4000	80	80	85.9	±3 dB		

"E" Calibrator

Audiometer 70 dB at frequency	Setting for		Expected reading "A" slow	ANSI intensity tolerance	Actual reading	
	Black knob	Red circle			Right	Left
500	70	70	79.4	±3 dB		
1000	70	70	76.8	±3 dB		
2000	80	80	80.7	±3 dB		
4000	80	80	85.9	±3 dB		

"F" Masking Generator Calibration

Masking generator Center frequency	Masking level knob	Setting for		Expected reading "C" slow	Tolerance dB	Actual reading	
		Black knob	Red knob			Right Phone	Left Phone
500	60	80	80	81.7	±3		
1000	70	80	80	88.7	±3		
2000	70	90	90	94.9	±3		
4000	70	80	80	82.0	±3		

Note: Each field calibrator (C, D, and E) has the same expected readings for these masking generator signals

Technician

Audiometry (Air), Ages 4-19 Years

Form MRA-12-10 (2-17-76)			Form Approved O.H.S. No. 68-R1302		
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE HEALTH RESOURCES ADMINISTRATION NATIONAL CENTER FOR HEALTH STATISTICS AUDIOMETRY (AIR) (AGES 4-19) HEALTH AND NUTRITION EXAMINATION SURVEY II					
a. Deck No. 306	b. Audio No. (101) _____	c. Examiner No. (102) _____	d. Age _____		
START HERE IF SAMPLE NUMBER EVEN 1. AIR CONDUCTION - RIGHT EAR			START HERE IF SAMPLE NUMBER ODD 2. AIR CONDUCTION - LEFT EAR		
Retest R with masking on L* (a)	Frequency (Hz) (b)	Hearing level (c)	Retest L with masking on R* (a)	Frequency (Hz) (b)	Hearing level (c)
(103)	1000	(104)	(105)	1000	(106)
(107)	2000	(108)	(109)	2000	(110)
(111)	4000	(112)	(113)	4000	(114)
(115)	500	(116)	(117)	500	(118)
(119)	1000	(120)	(121)	1000	(122)
3. CONDITION AFFECTING TEST RESULTS Mark all that apply			*Retest poorer ear with A/C masking on better ear only if differences in A/C-HL between the two ears is 40 dB or more **Specify frequencies affected and describe		
(123) 1 <input type="checkbox"/> None 2 <input type="checkbox"/> Cold or sinusitis now 3 <input type="checkbox"/> Ear discharge 4 <input type="checkbox"/> Ringing or other noises in ears (124) 5 <input type="checkbox"/> Equipment defect** 6 <input type="checkbox"/> Cold or sinusitis within one week 7 <input type="checkbox"/> Earache within week 8 <input type="checkbox"/> Other - Describe**			_____ _____ _____ _____ _____		
Notes					
					Sample number (100)

VI. REFERENCES

- 1 National Center for Health Statistics: Replication: An approach to the Analysis of Data from Complex Surveys, by P.J. McCarthy. Vital and Health Statistics. Series 2, No. 14. DHEW Pub. No. (PHS) 79-1269. Public Health Service. Washington, D.C. U.S. Government Printing Office, 1966.
- 2 Survey Research Center Computer Support Group, OSIRIS IV User's Manual, Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 1979.
- 3 Holt, M. M.: SURREGR: Standard Errors of Regression Coefficients from Sample Survey Data. Research Triangle Institute, Research Triangle Park, N.C., 1977. (Revised April 1982 by B. V. Shah)
- 4 Hidiroglou, M. A., Fuller, W. A., Hickman, R. D.: SUPER CARP. Survey Section, Statistical Laboratory, Iowa State University, Ames, Iowa. Sixth Edition. October, 1980.
- 5 Woodruff, R. S.: A Sample Method for Approximating the Variance of a Complicated Estimate. Journal of the American Statistical Association, 66:411-414, 1971.
- 6 Shah, B.V.: SESUDAAN: Standard Errors Program for Computing of Standardized Rates from Sample Survey Data. Research Triangle Institute, Research Triangle Park, N.C., RTI/5250/00-01S, April, 1981.
- 7 National Center for Health Statistics: A Statistical Methodology for Analyzing Data from a Complex Survey: The First National Health and Nutrition Examination Survey, by J. R. Landis, J. M. Lepkowski, S. A. Stehouwer, and S. A. Eklund. Vital and Health Statistics. Series 2, NO. 92. DHHS Pub. No. (PHS) 82-1366. Public Health Service. Washington, D.C. U.S. Government Printing Office, September, 1982.

- 8 National Center for Health Statistics: Plan and Operation of the Second National Health and Nutrition Examination Survey, 1976-1980, by A. McDowell, A. Engel, J. T. Massey and K. Maurer. Vital and Health Statistics. Series 1, No. 15. DHHS Pub. No. (PHS) 81-1317. Public Health Service. Washington, D.C. U.S. Government Printing Office, July, 1981.
- 9 U.S. Bureau of the Census: Money Income and Poverty Status of Families and Persons in the United States: 1976 (Advance Report). Current Population Reports. Series P-60, No. 107. U.S. Government Printing Office, Washington, D.C., 1977.
- 10 U.S. Bureau of the Census: Money Income and Poverty Status of Families and Persons in the United States: 1977 (Advance Report). Current Population Reports. Series P-60, No. 116. U.S. Government Printing Office, Washington, D.C., 1978.
- 11 U.S. Bureau of the Census: Money Income and Poverty Status of Families and Persons in the United States: 1978 (Advance Report). Current Population Reports. Series P-60, No. 120. U.S. Government Printing Office, Washington, D.C., 1979.
- 12 U.S. Bureau of the Census: Money Income and Poverty Status of Families and Persons in the United States: 1979 (Advance Report). Current Population Reports. Series P-60, No. 125. U.S. Government Printing Office, Washington, D.C., 1980.
- 13 U.S. Bureau of the Census: Money Income and Poverty Status of Families and Persons in the United States: 1980 (Advance Data from the March, 1981 Current Population Survey). Current Population Reports. Series P-60, No. 127. U.S. Government Printing Office, Washington, D.C., 1981.

- 14 Orshansky, M.: Counting the Poor: Another Look at the Poverty Profile. Social Security Bulletin. Vol. 28, No. 1. U.S. Government Printing Office, Washington, D.C., January, 1965.
- 15 Orshansky, M.: Who's Who Among the Poor: A Demographic View of Poverty. Social Security Bulletin. Vol. 28, No. 7. U.S. Government Printing Office, Washington, D.C., July, 1965.
- 16 U.S. Bureau of the Census: Special Studies. Current Population Reports. Series P-23, No. 28. U.S. Government Printing Office, Washington, D.C., August 12, 1969.
- 17 Circular No. A-46, Transmitted Memorandum No. 9, Executive Office of the President, Bureau of the Budget, August 29, 1969, and Exhibit L (rev.).